

Fitting veto source data to exponential functions

$$FCN = \theta(7,i)\{\exp(-\alpha_x(i-1) + \exp(-\alpha_y(j-1)) - 1\} \\ + \beta * \theta(i,8)\exp(-\alpha_x(i-1))$$

“on” for hot side, xbins 1-7
“on” for cold side, xbins 8-15

i is xbin,

j is ybin

β the barrier term to simulate the scintillator discontinuity in middle of paddle
(we expect it to be < 1)

“xbins” here count from hot side to cold side, not necessarily corresponding to the grid written on the paddles.

α_x α_y strengths of the exponential decay in x, y directions

$$\theta(\arg 1, \arg 2) = 1 \text{ for } \arg 1 \geq \arg 2 \\ = 0 \text{ for } \arg 1 < \arg 2$$

L PMT Results

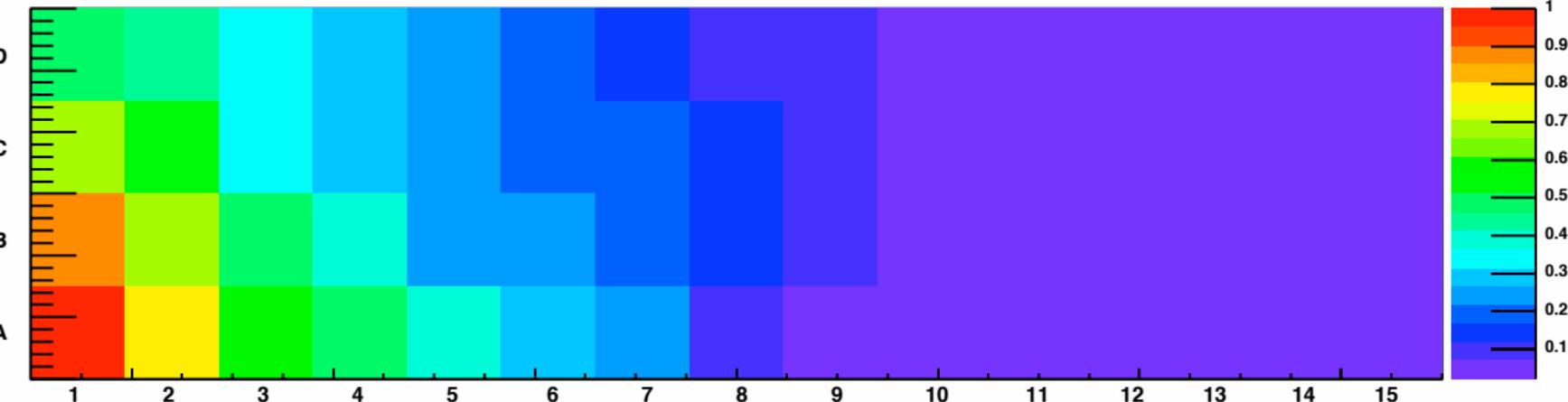
PMT	α_x	α_y	β
1L	0.217	0.090	0.456
3L	0.251	0.072	0.517
4L	0.157	0.136	0.191
5L	0.119	0.074	0.275
7L	0.159	0.067	0.370
8L	0.141	0.072	0.317
9L	0.121	0.057	0.292
10L	0.146	0.053	0.316
11L	0.138	0.143	0.144
12L	0.118	0.071	0.321
13L	0.110	0.090	0.230
14L	0.138	0.083	0.266
15L	0.106	0.057	0.283
16L	0.143	0.063	0.359

R PMT Results

PMT	α_x	α_y	β
1R	0.199	0.094	0.378
3R	0.221	0.102	0.332
4R	0.159	0.119	0.218
5R	0.143	0.058	0.336
7R	0.150	0.061	0.439
8R	0.163	0.082	0.338
9R	0.135	0.081	0.284
10R	0.136	0.086	0.279
11R	0.098	0.202	0.108
12R	0.123	0.036	0.392
13R	0.111	0.059	0.249
14R	0.105	0.071	0.226
15R	0.104	0.010	0.296
16R	0.100	0.070	0.223

Paddle 1 PMT L

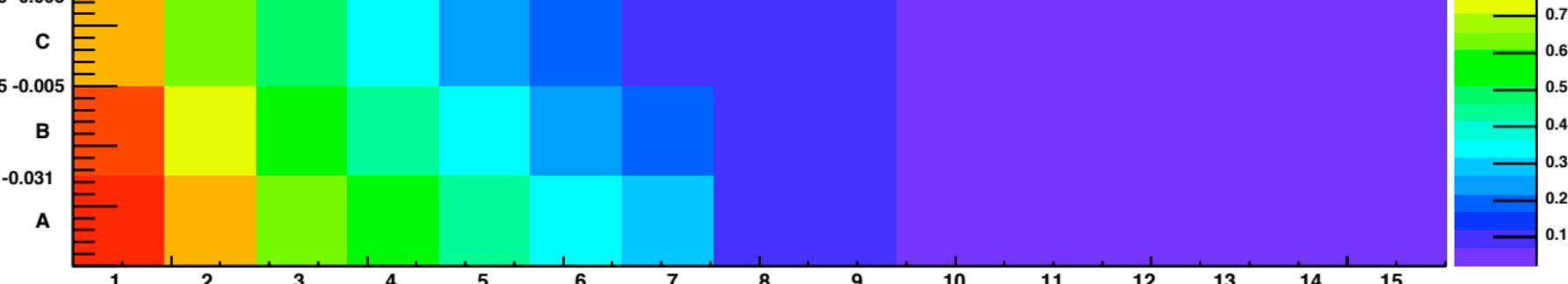
Data ->



Fit ->

$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.217(\text{xbin} - 1)] + \text{Exp}[-0.090(\text{ybin} - 1)] - 1 \} + 0.456 \theta(\text{xbin}, 9) \text{Exp}[-0.217(\text{xbin} - 1)]$$

x-decay: $0.217 + 0.005 - 0.005$

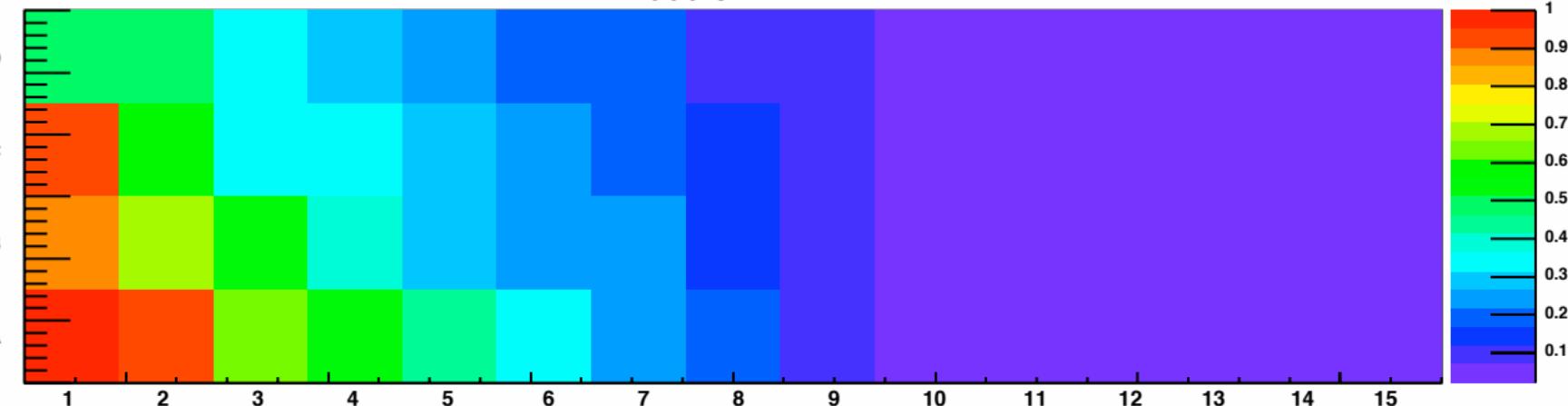


y-decay: $0.090 + 0.005 - 0.005$

barrier: $0.456 + 0.033 - 0.031$

Paddle 1 PMT R

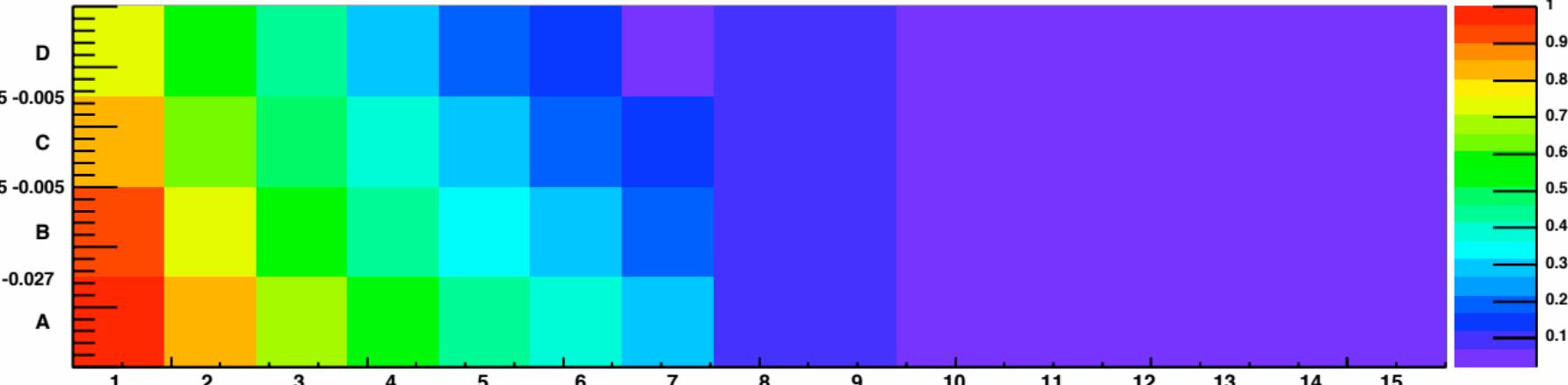
Data ->



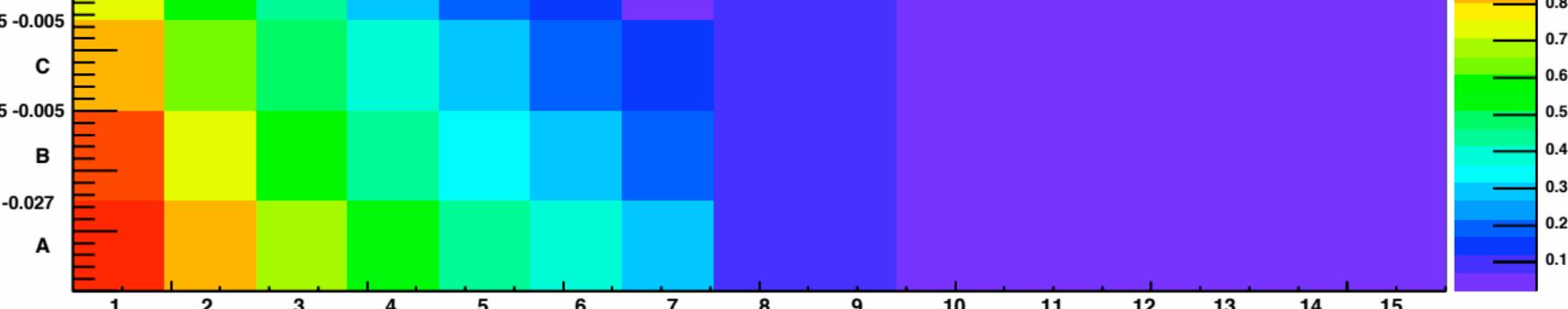
Fit ->

$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.199(\text{xbin} - 1)] + \text{Exp}[-0.094(\text{ybin} - 1)] - 1 \} + 0.378 \theta(\text{xbin}, 9) \text{Exp}[-0.199(\text{xbin} - 1)]$$

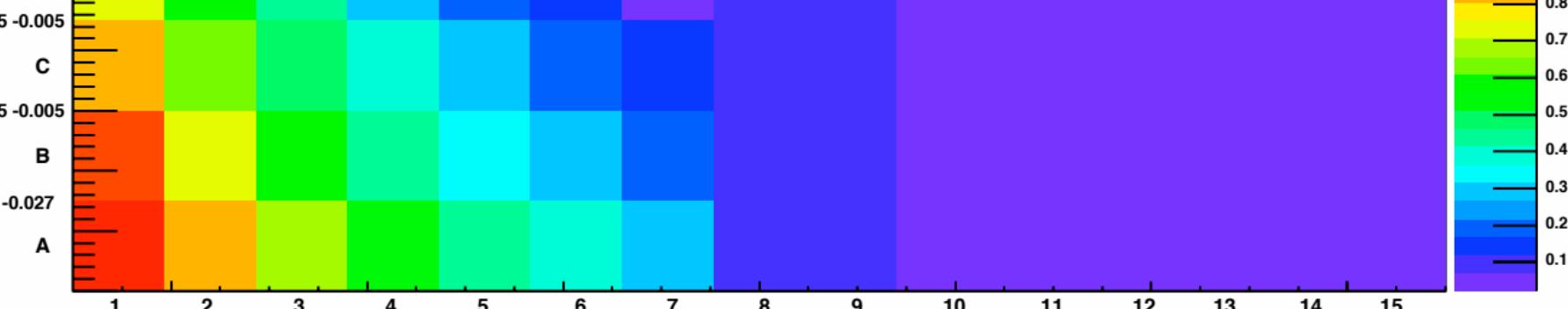
x-decay: $0.199 + 0.005 - 0.005$



y-decay: $0.094 + 0.005 - 0.005$

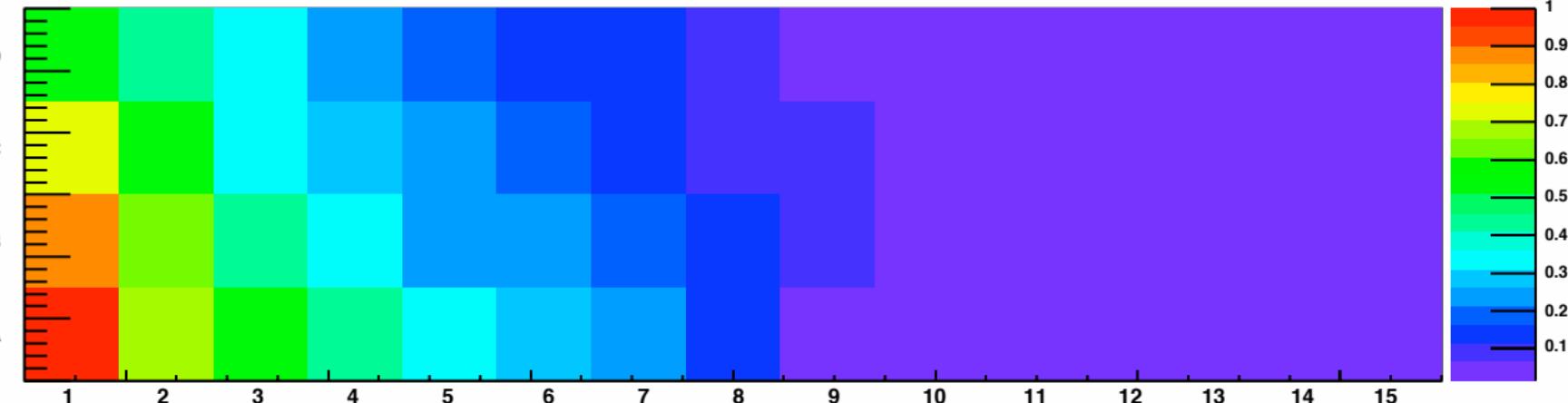


barrier: $0.378 + 0.028 - 0.027$



Paddle 3 PMT L

Data ->



Fit ->

$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.251(\text{xbin} - 1)] + \text{Exp}[-0.072(\text{ybin} - 1)] - 1 \} + 0.517 \theta(\text{xbin}, 9) \text{Exp}[-0.251(\text{xbin} - 1)]$$

x-decay: $0.251 + 0.005 - 0.005$

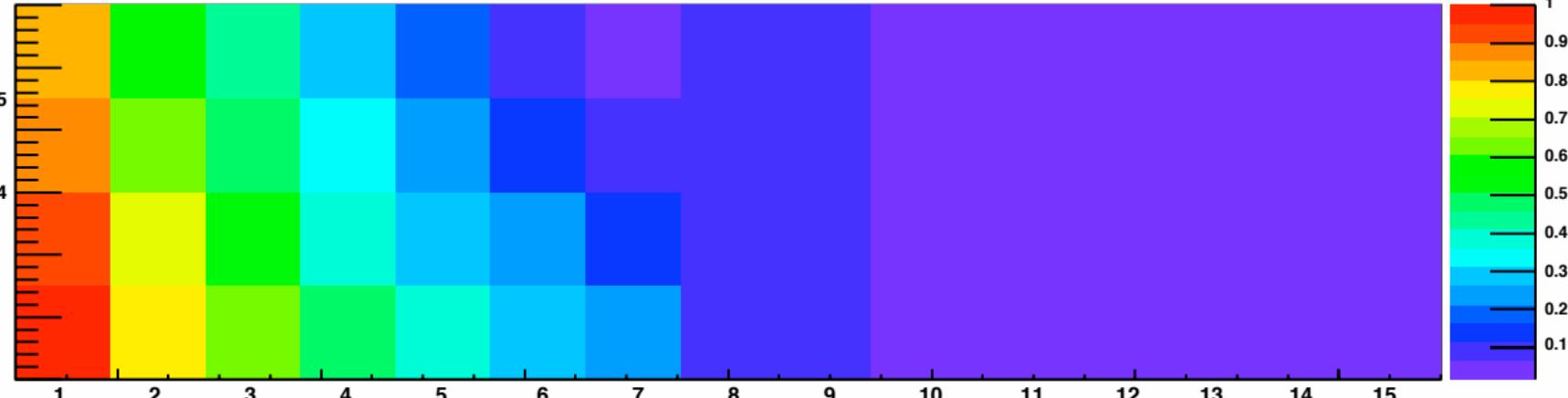
C

y-decay: $0.072 + 0.004 - 0.004$

B

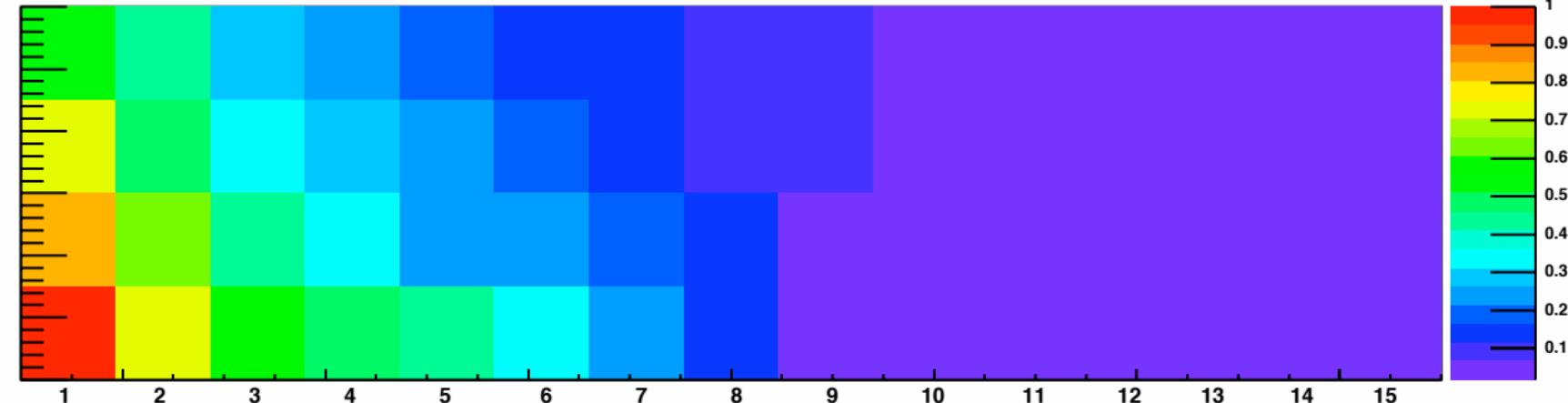
barrier: $0.517 + 0.035 - 0.033$

A



Paddle 3 PMT R

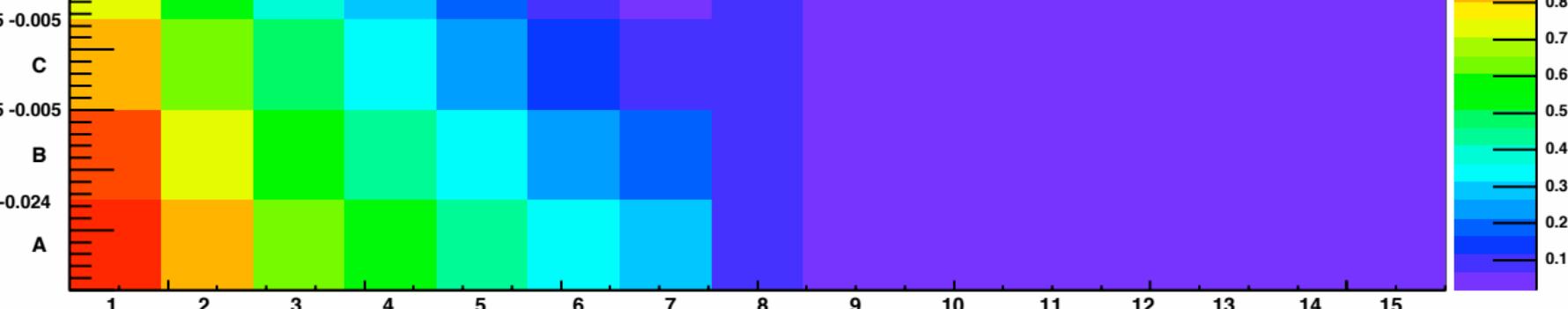
Data ->



Fit ->

$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.211(\text{xbin} - 1)] + \text{Exp}[-0.102(\text{ybin} - 1)] - 1 \} + 0.332 \theta(\text{xbin}, 9) \text{Exp}[-0.211(\text{xbin} - 1)]$$

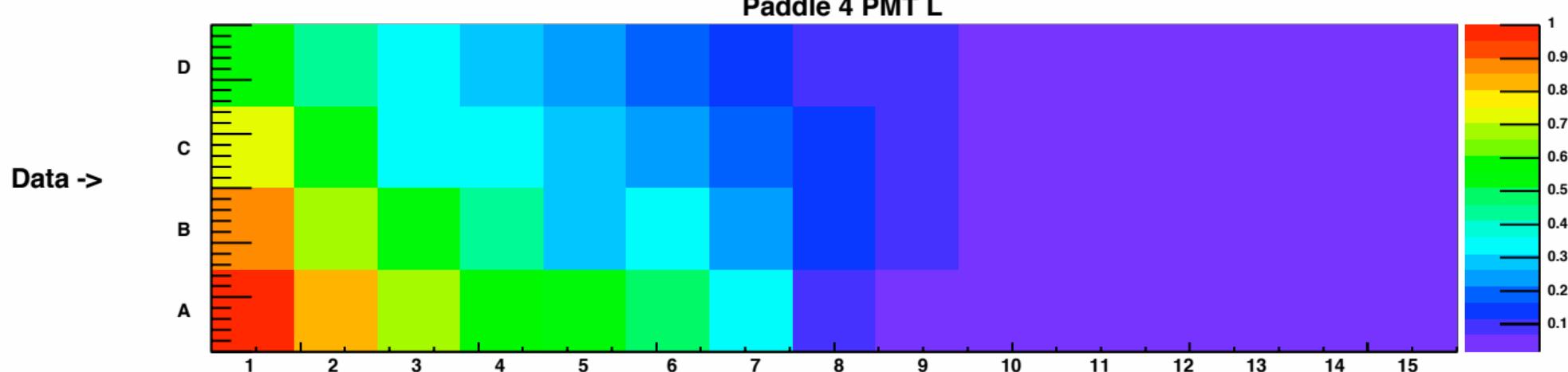
x-decay: $0.211 + 0.005 - 0.005$



y-decay: $0.102 + 0.005 - 0.005$

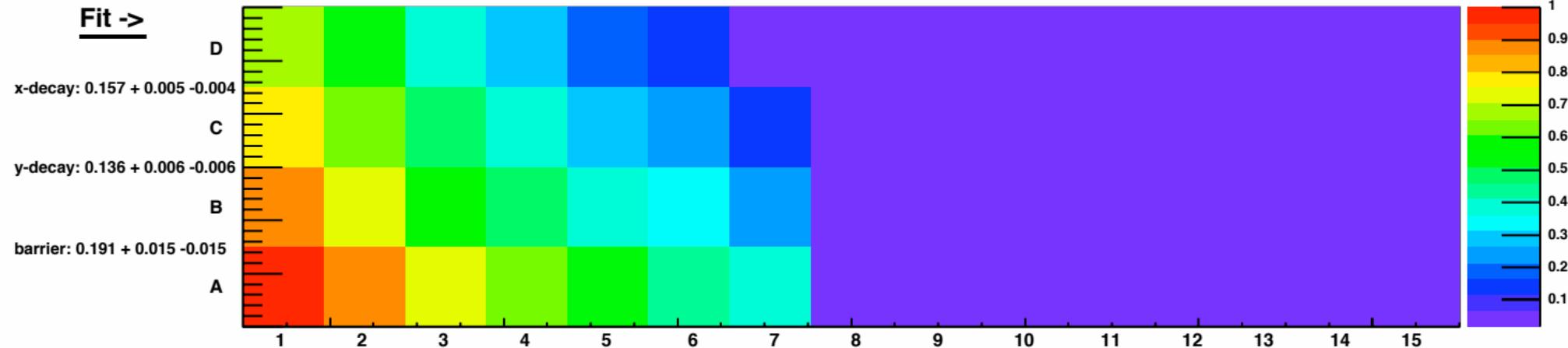
barrier: $0.332 + 0.026 - 0.024$

Paddle 4 PMT L



$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.157(\text{xbin} - 1)] + \text{Exp}[-0.136(\text{ybin} - 1)] - 1 \} + 0.191 \theta(\text{xbin}, 9) \text{Exp}[-0.157(\text{xbin} - 1)]$$

Fit ->

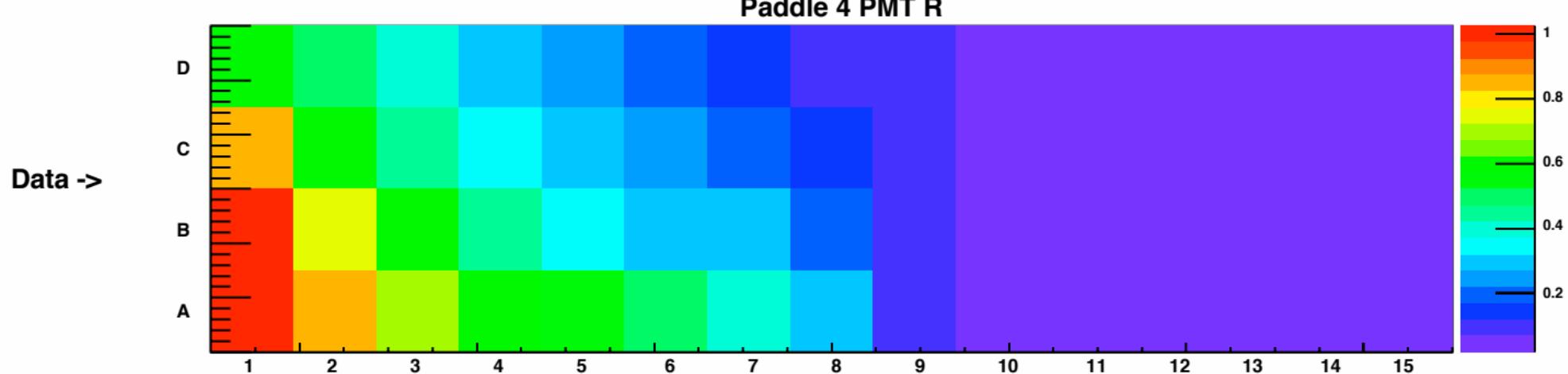


x-decay: $0.157 + 0.005 - 0.004$

y-decay: $0.136 + 0.006 - 0.006$

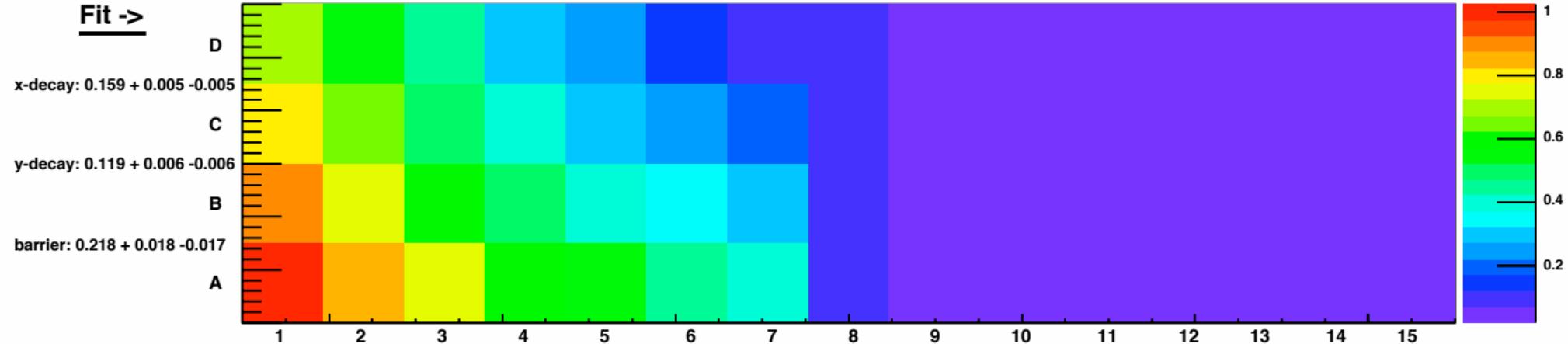
barrier: $0.191 + 0.015 - 0.015$

Paddle 4 PMT R

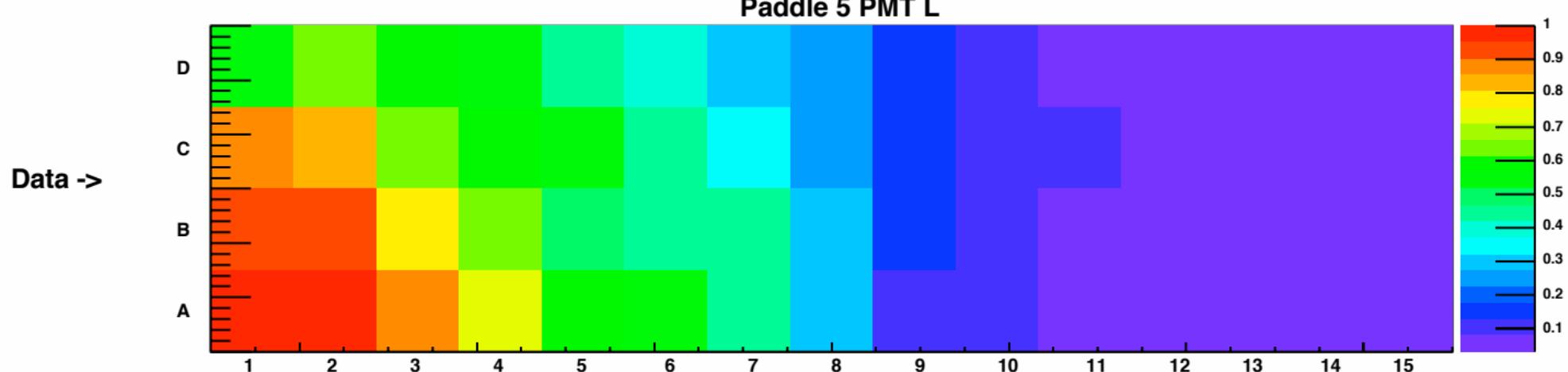


$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.159(\text{xbin} - 1)] + \text{Exp}[-0.119(\text{ybin} - 1)] - 1 \} + 0.218 \theta(\text{xbin}, 9) \text{Exp}[-0.159(\text{xbin} - 1)]$$

Fit ->

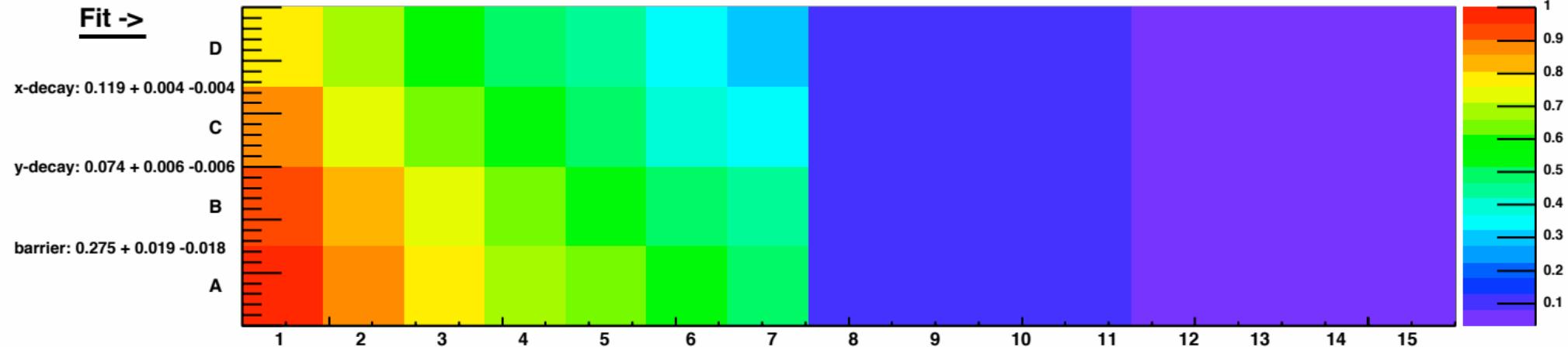


Paddle 5 PMT L



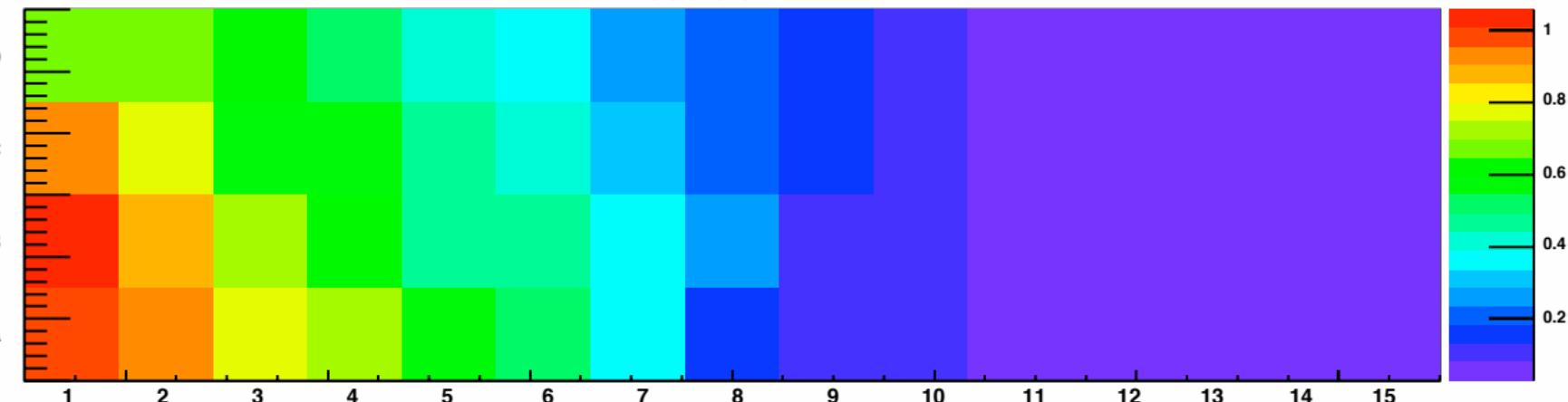
$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.119(\text{xbin} - 1)] + \text{Exp}[-0.074(\text{ybin} - 1)] - 1 \} + 0.275 \theta(\text{xbin}, 9) \text{Exp}[-0.119(\text{xbin} - 1)]$$

Fit ->



Paddle 5 PMT R

Data ->



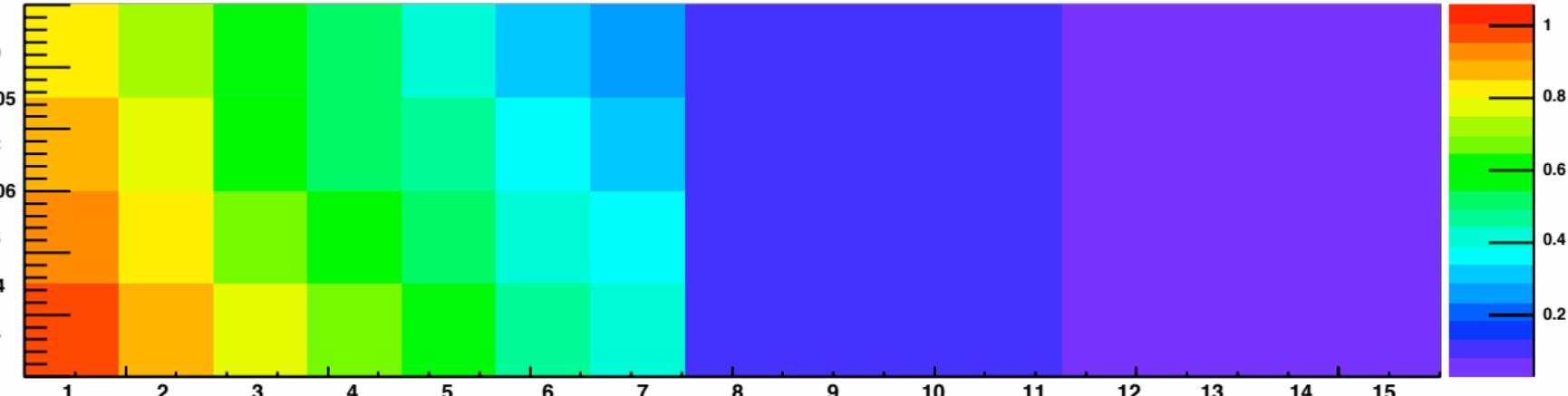
$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.143(\text{xbin} - 1)] + \text{Exp}[-0.058(\text{ybin} - 1)] - 1 \} + 0.336 \theta(\text{xbin}, 9) \text{Exp}[-0.143(\text{xbin} - 1)]$$

Fit ->

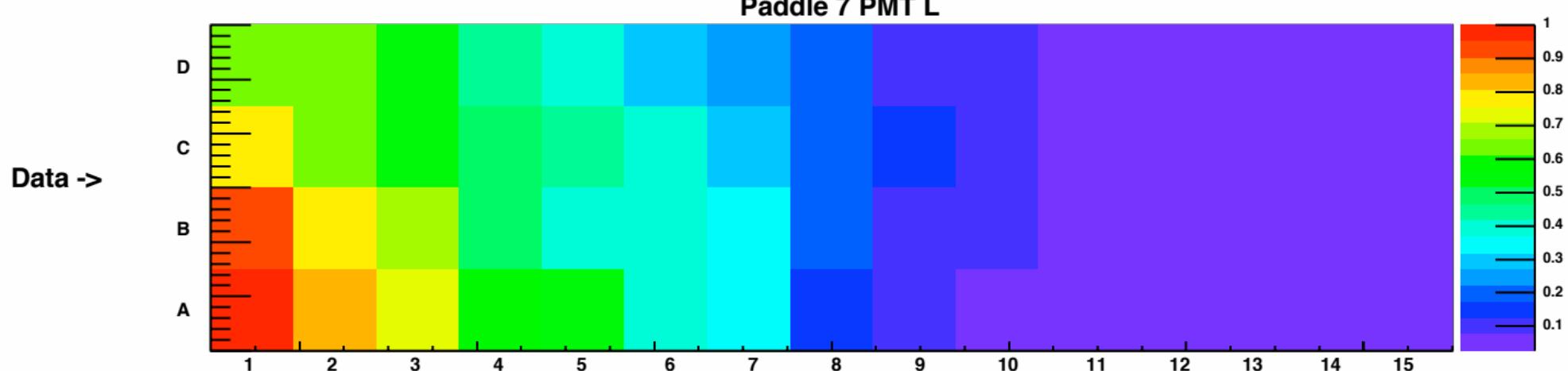
x-decay: $0.143 + 0.005 - 0.005$

y-decay: $0.058 + 0.006 - 0.006$

barrier: $0.336 + 0.026 - 0.024$

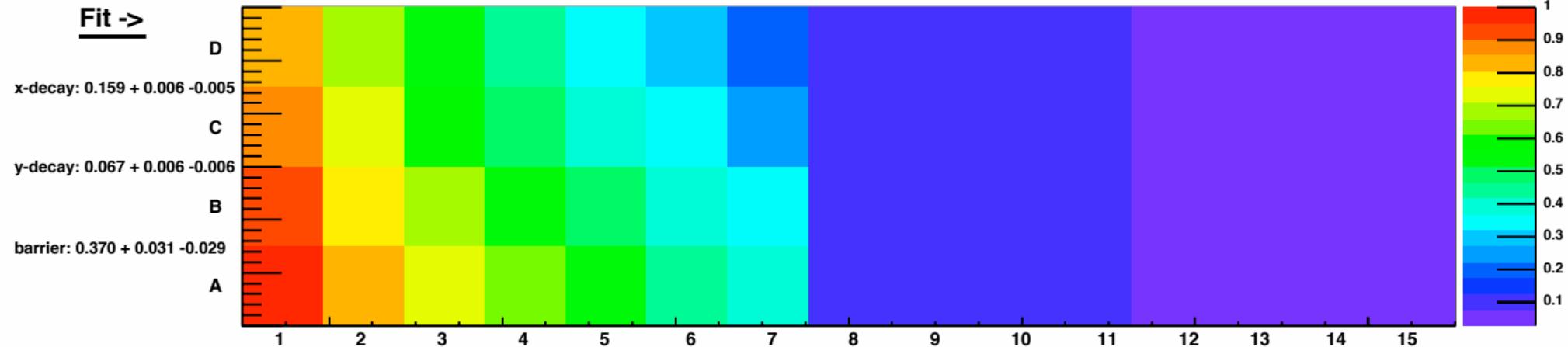


Paddle 7 PMT L

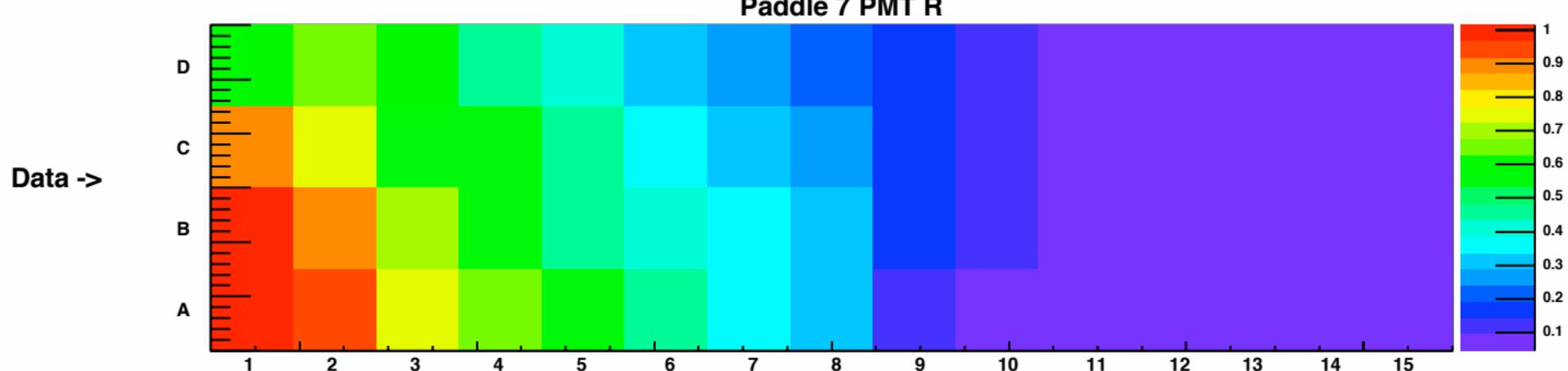


$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.159(\text{xbin} - 1)] + \text{Exp}[-0.067(\text{ybin} - 1)] - 1 \} + 0.370 \theta(\text{xbin}, 9) \text{Exp}[-0.159(\text{xbin} - 1)]$$

Fit ->

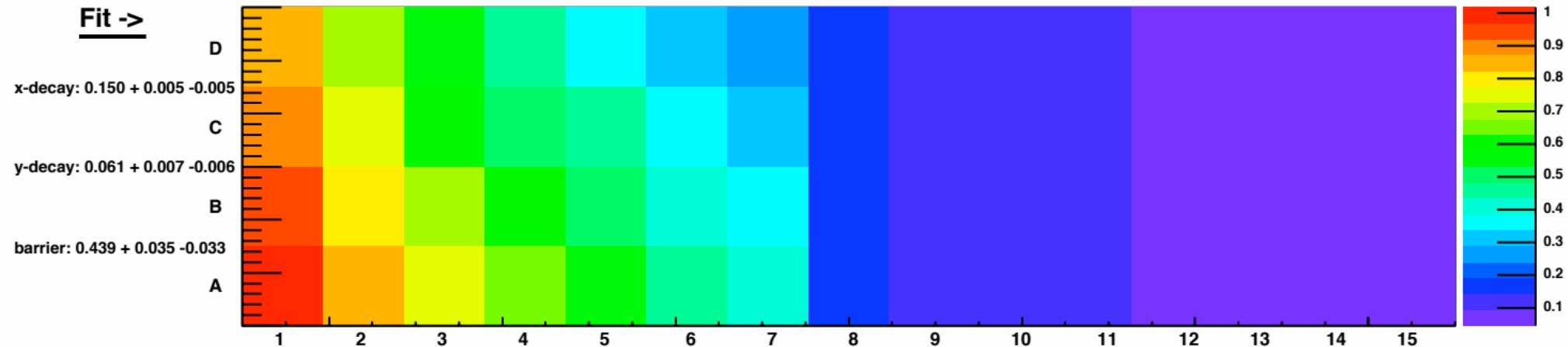


Paddle 7 PMT R

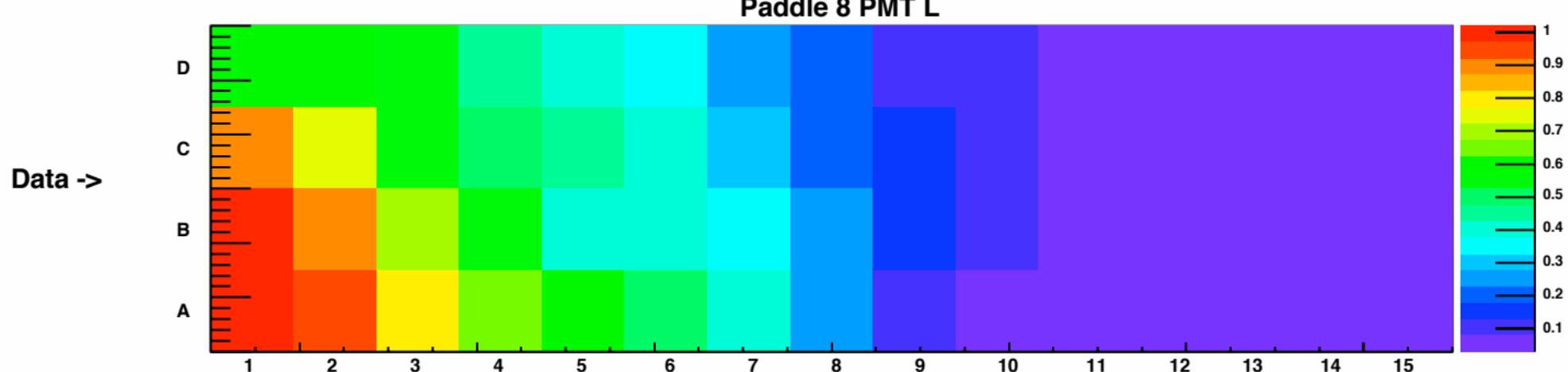


$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.150(\text{xbin} - 1)] + \text{Exp}[-0.061(\text{ybin} - 1)] - 1 \} + 0.439 \theta(\text{xbin}, 9) \text{Exp}[-0.150(\text{xbin} - 1)]$$

Fit ->

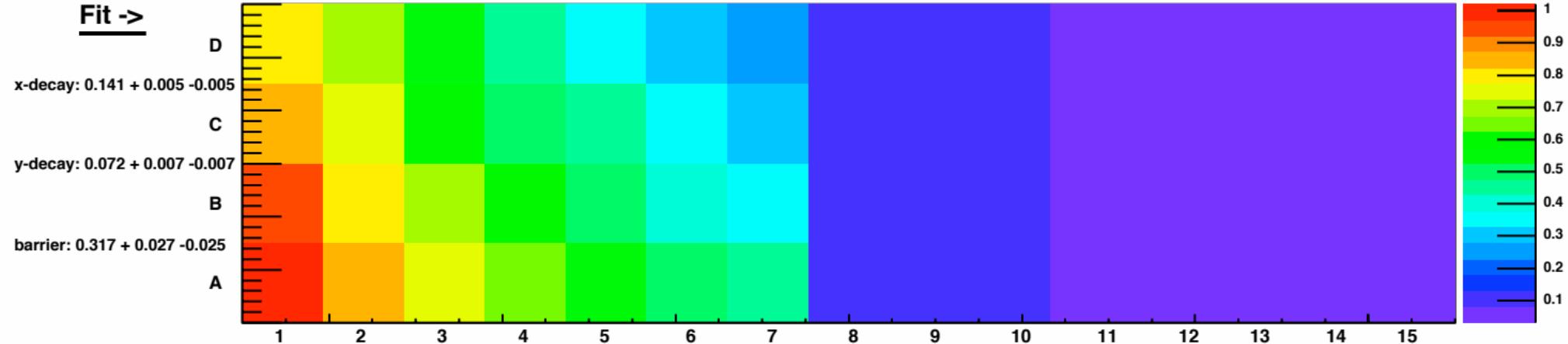


Paddle 8 PMT L



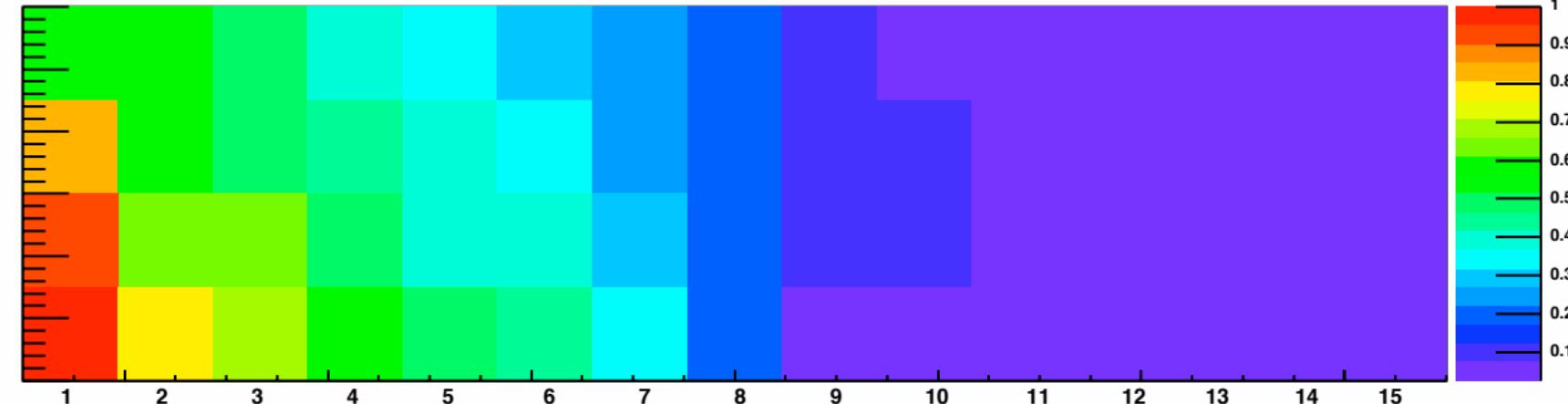
$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.141(\text{xbin} - 1)] + \text{Exp}[-0.072(\text{ybin} - 1)] - 1 \} + 0.317 \theta(\text{xbin}, 9) \text{Exp}[-0.141(\text{xbin} - 1)]$$

Fit ->



Paddle 8 PMT R

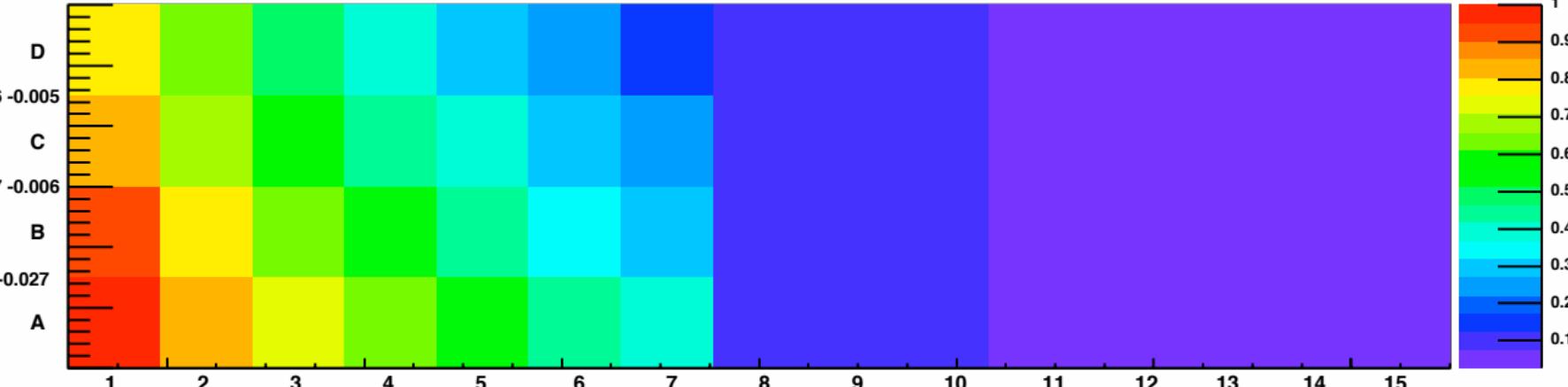
Data ->



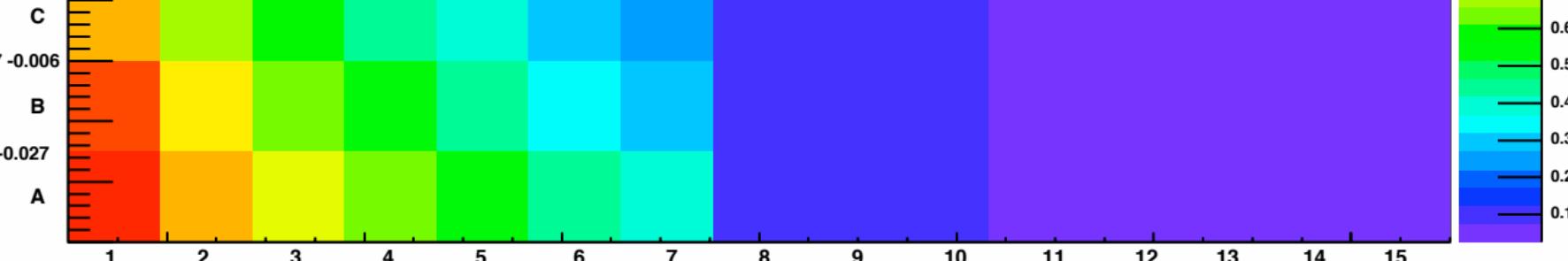
$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.163(\text{xbin} - 1)] + \text{Exp}[-0.082(\text{ybin} - 1)] - 1 \} + 0.338 \theta(\text{xbin}, 9) \text{Exp}[-0.163(\text{xbin} - 1)]$$

Fit ->

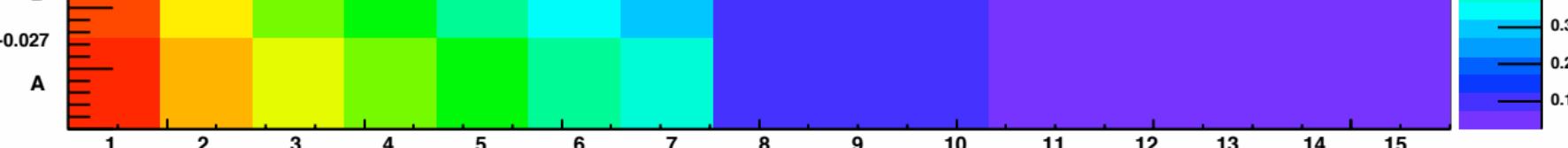
x-decay: $0.163 + 0.006 - 0.005$



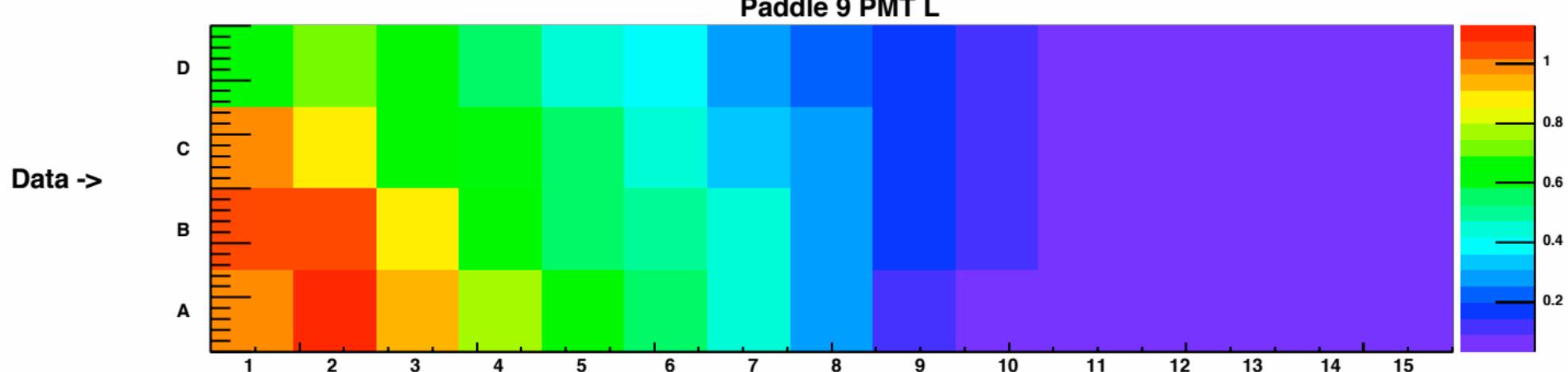
y-decay: $0.082 + 0.007 - 0.006$



barrier: $0.338 + 0.029 - 0.027$

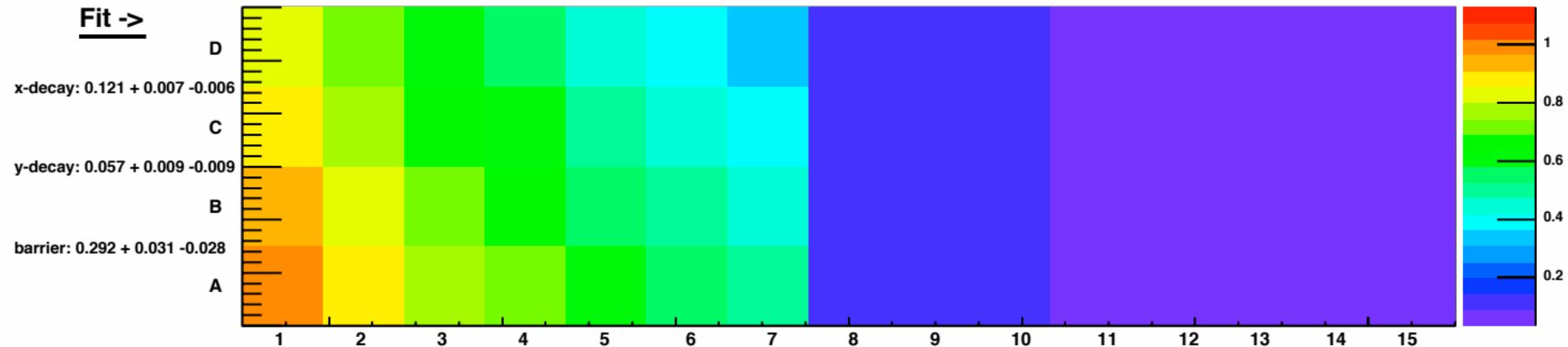


Paddle 9 PMT L



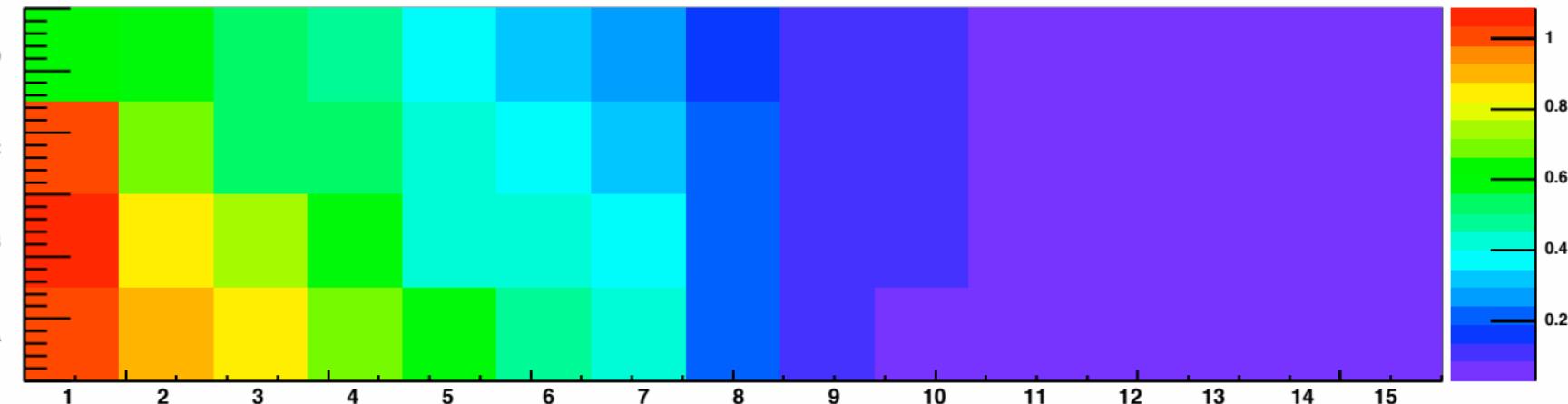
$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.121(\text{xbin} - 1)] + \text{Exp}[-0.057(\text{ybin} - 1)] - 1 \} + 0.292 \theta(\text{xbin}, 9) \text{Exp}[-0.121(\text{xbin} - 1)]$$

Fit ->



Paddle 9 PMT R

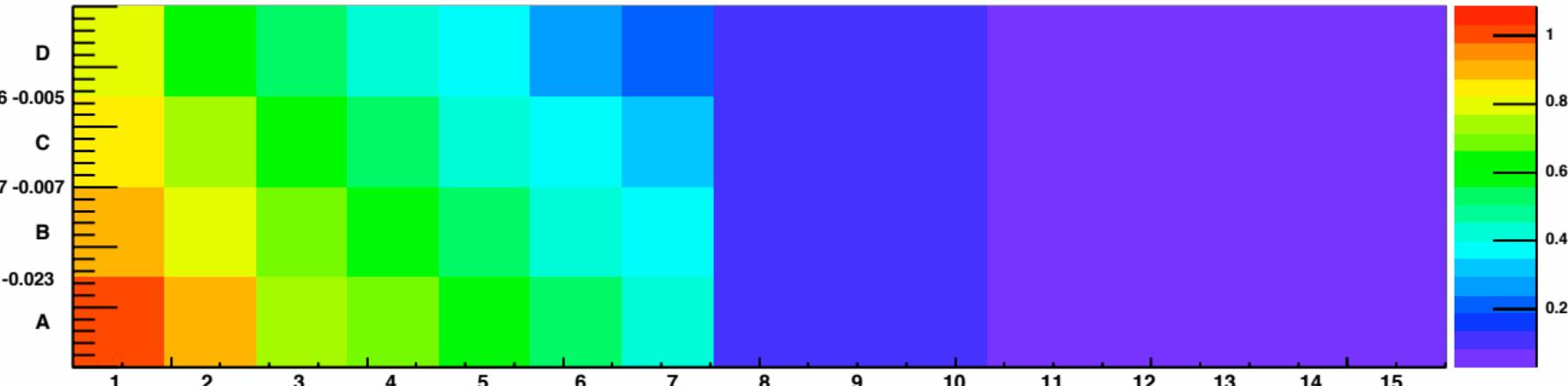
Data ->



Fit ->

$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.135(\text{xbin} - 1)] + \text{Exp}[-0.081(\text{ybin} - 1)] - 1 \} + 0.284 \theta(\text{xbin}, 9) \text{Exp}[-0.135(\text{xbin} - 1)]$$

x-decay: $0.135 + 0.006 - 0.005$

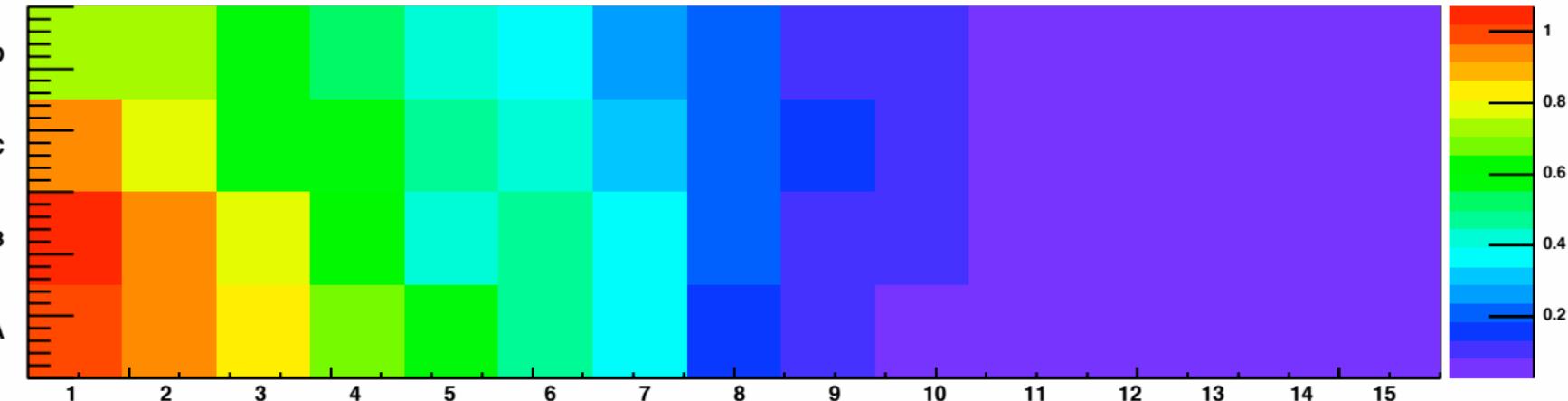


y-decay: $0.081 + 0.007 - 0.007$

barrier: $0.284 + 0.025 - 0.023$

Paddle 10 PMT L

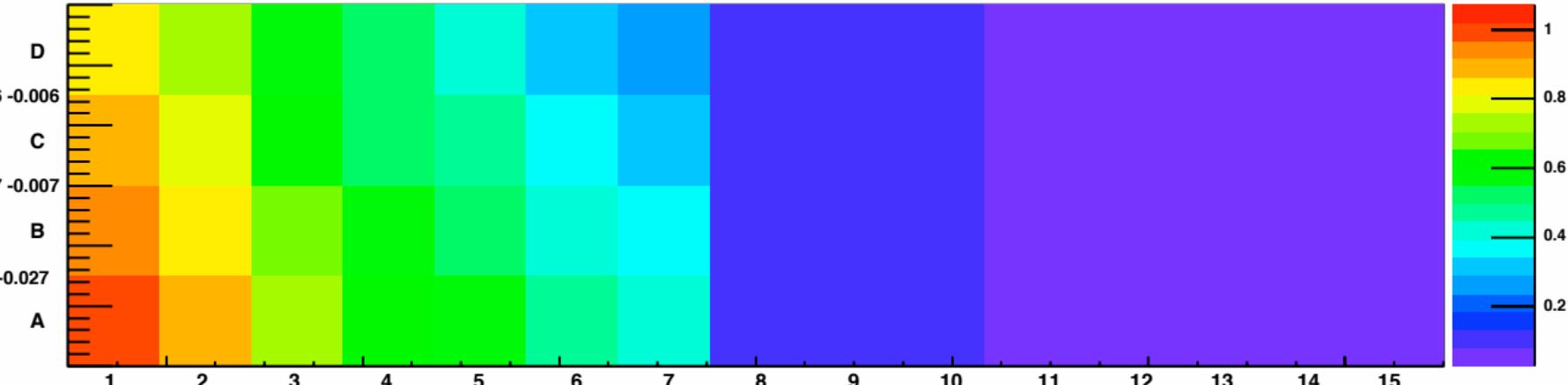
Data ->



$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.146(\text{xbin} - 1)] + \text{Exp}[-0.053(\text{ybin} - 1)] - 1 \} + 0.316 \theta(\text{xbin}, 9) \text{Exp}[-0.146(\text{xbin} - 1)]$$

Fit ->

x-decay: $0.146 + 0.006 - 0.006$

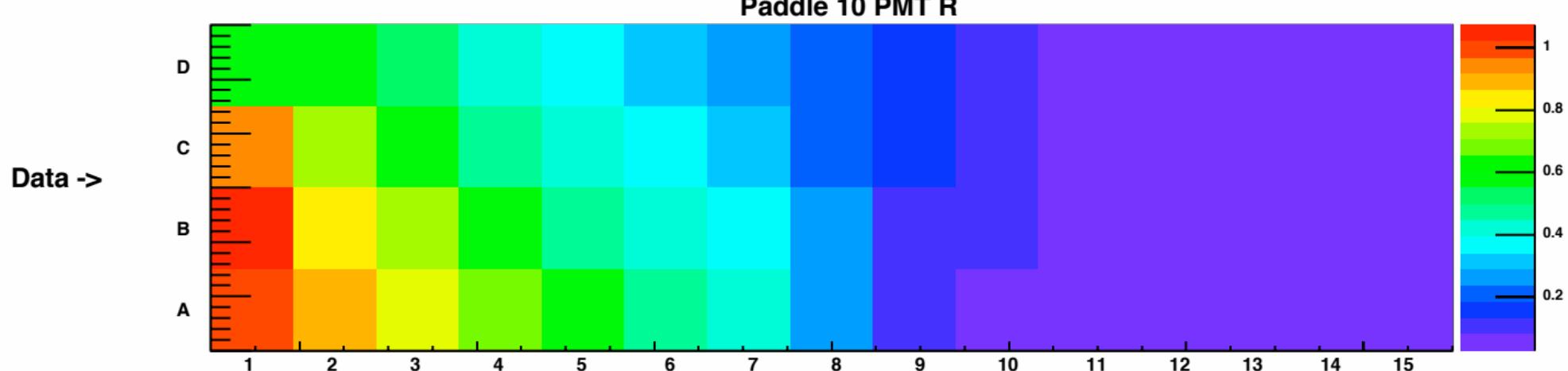


y-decay: $0.053 + 0.007 - 0.007$

barrier: $0.316 + 0.029 - 0.027$

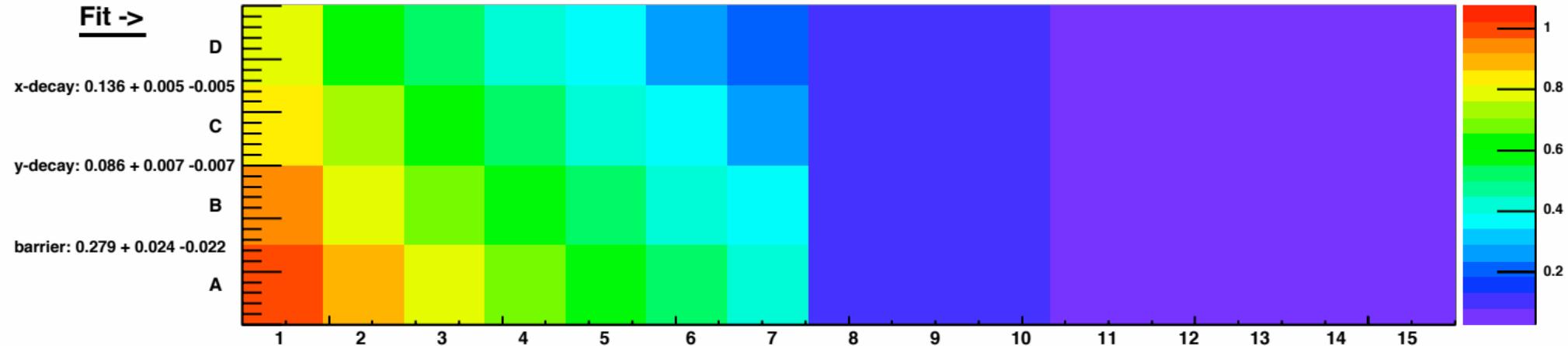
A

Paddle 10 PMT R

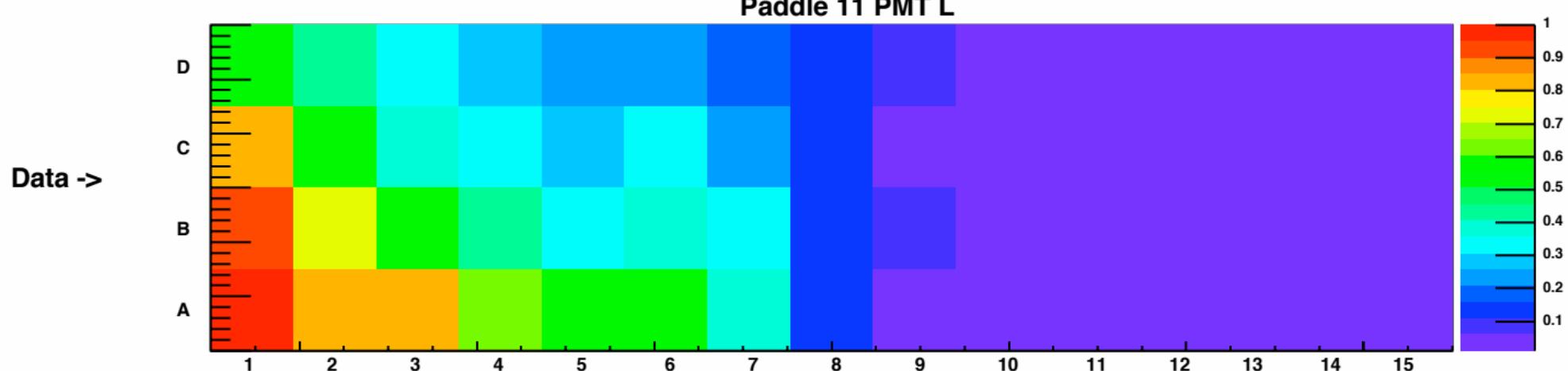


$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.136(\text{xbin} - 1)] + \text{Exp}[-0.086(\text{ybin} - 1)] - 1 \} + 0.279 \theta(\text{xbin}, 9) \text{Exp}[-0.136(\text{xbin} - 1)]$$

Fit ->

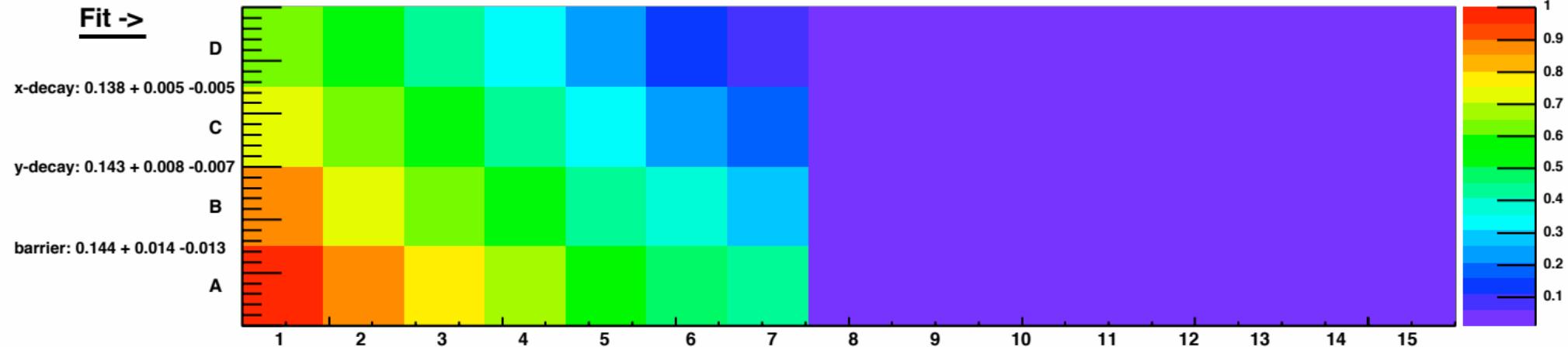


Paddle 11 PMT L



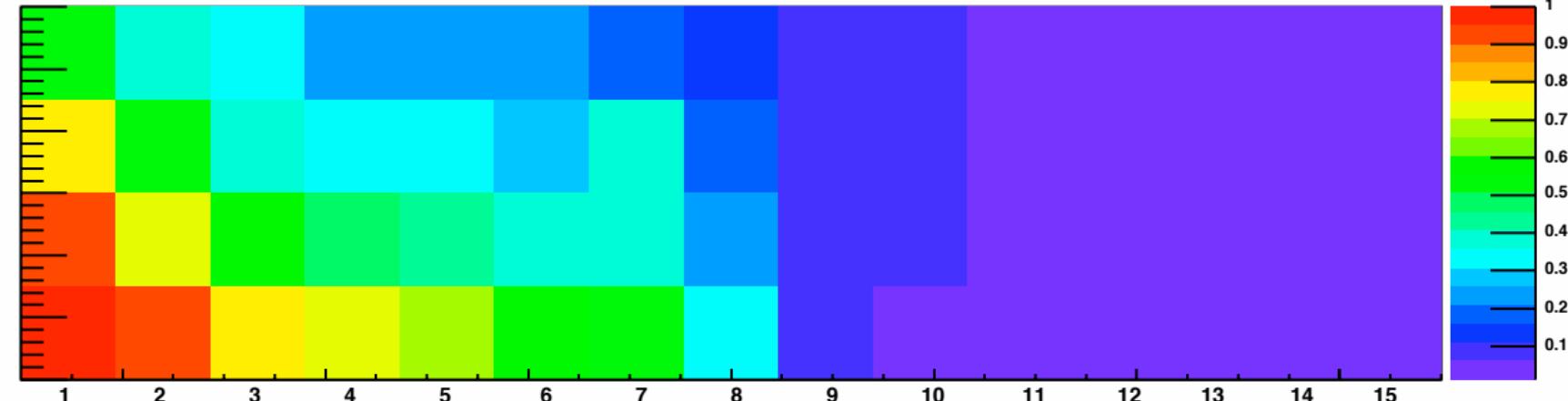
$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.138(\text{xbin} - 1)] + \text{Exp}[-0.143(\text{ybin} - 1)] - 1 \} + 0.144 \theta(\text{xbin}, 9) \text{Exp}[-0.138(\text{xbin} - 1)]$$

Fit ->



Paddle 11 PMT R

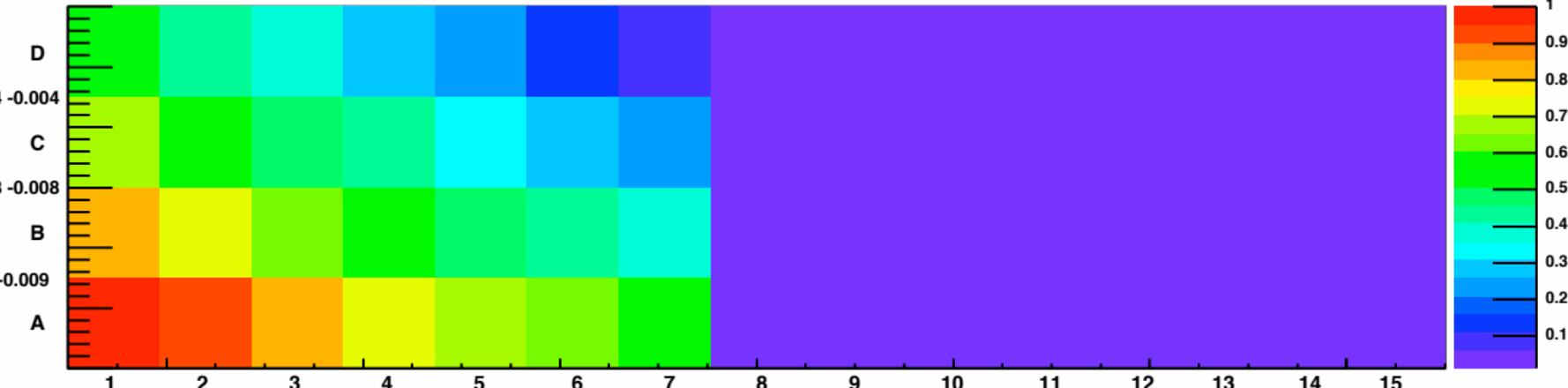
Data ->



Fit ->

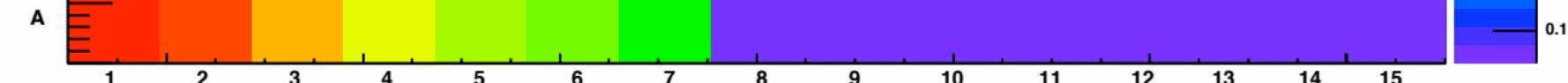
$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.098(\text{xbin} - 1)] + \text{Exp}[-0.202(\text{ybin} - 1)] - 1 \} + 0.108 \theta(\text{xbin}, 9) \text{Exp}[-0.098(\text{xbin} - 1)]$$

x-decay: $0.098 + 0.004 - 0.004$

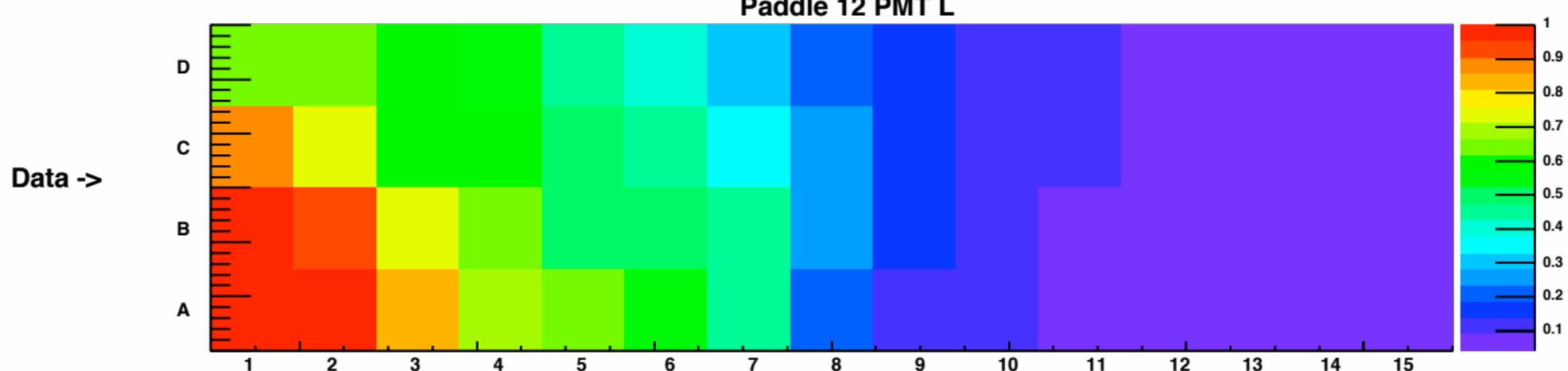


y-decay: $0.202 + 0.008 - 0.008$

barrier: $0.108 + 0.010 - 0.009$

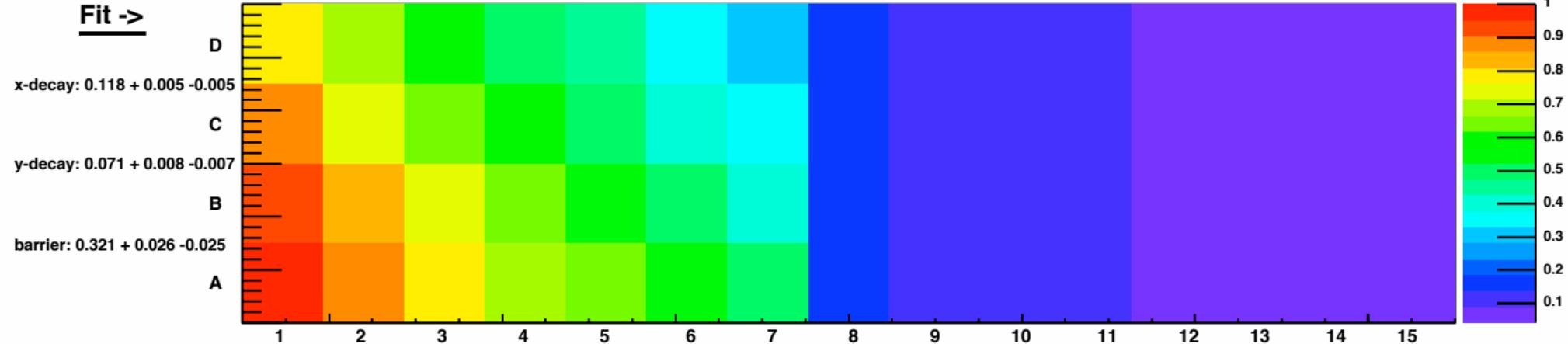


Paddle 12 PMT L

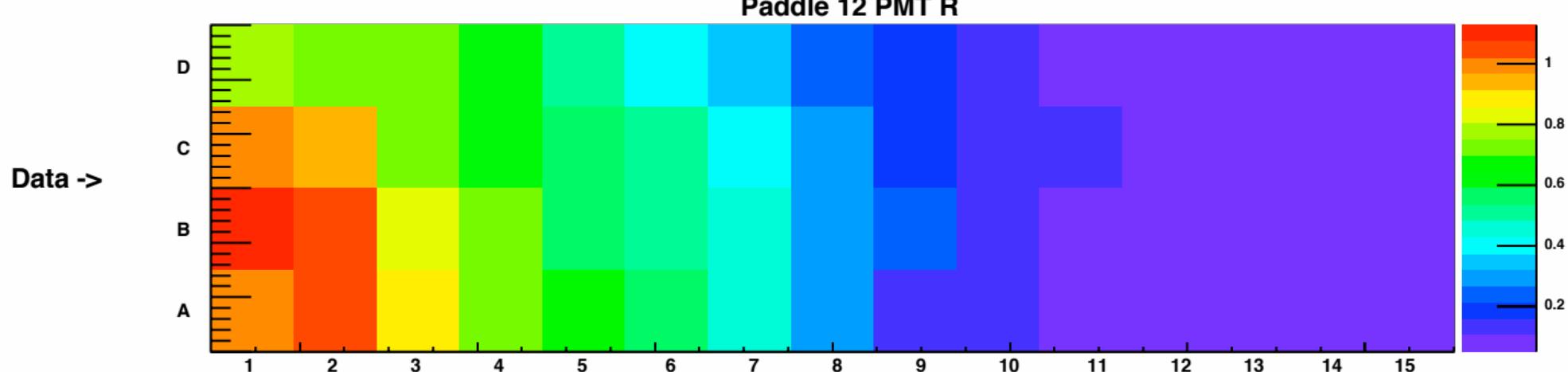


$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.118(\text{xbin} - 1)] + \text{Exp}[-0.071(\text{ybin} - 1)] - 1 \} + 0.321 \theta(\text{xbin}, 9) \text{Exp}[-0.118(\text{xbin} - 1)]$$

Fit ->

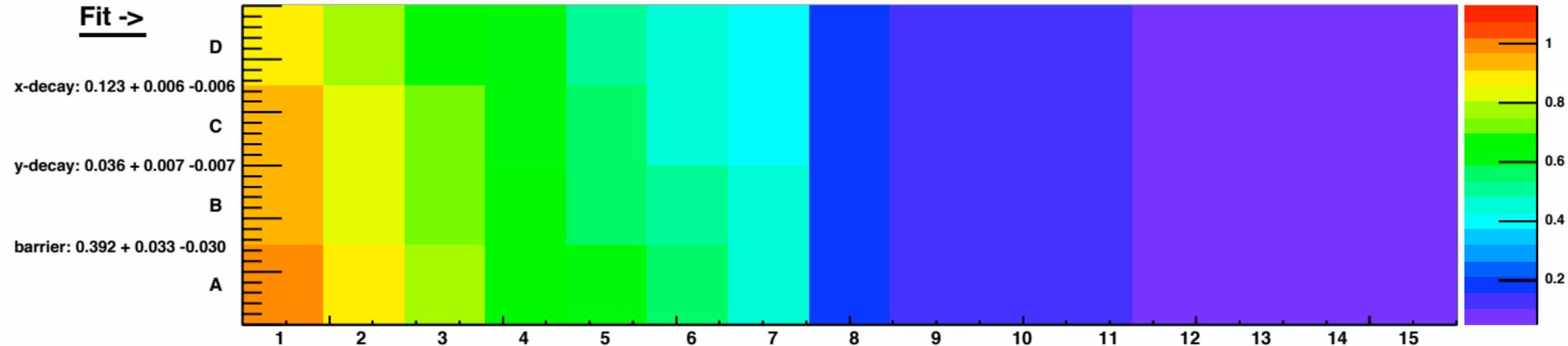


Paddle 12 PMT R

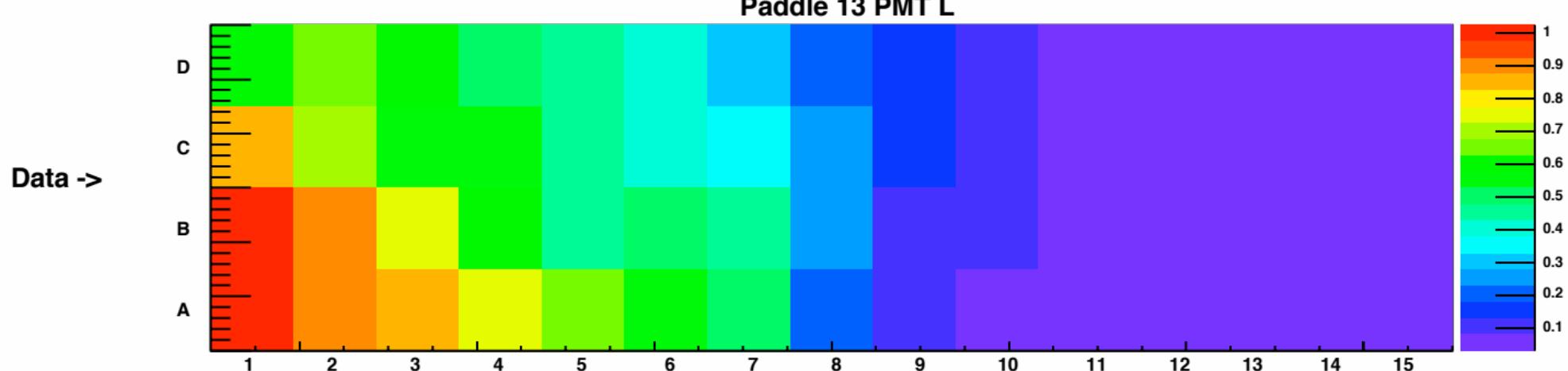


$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.123 (\text{xbin} - 1)] + \text{Exp}[-0.036 (\text{ybin} - 1)] - 1 \} + 0.392 \theta(\text{xbin}, 9) \text{Exp}[-0.123 (\text{xbin} - 1)]$$

Fit ->

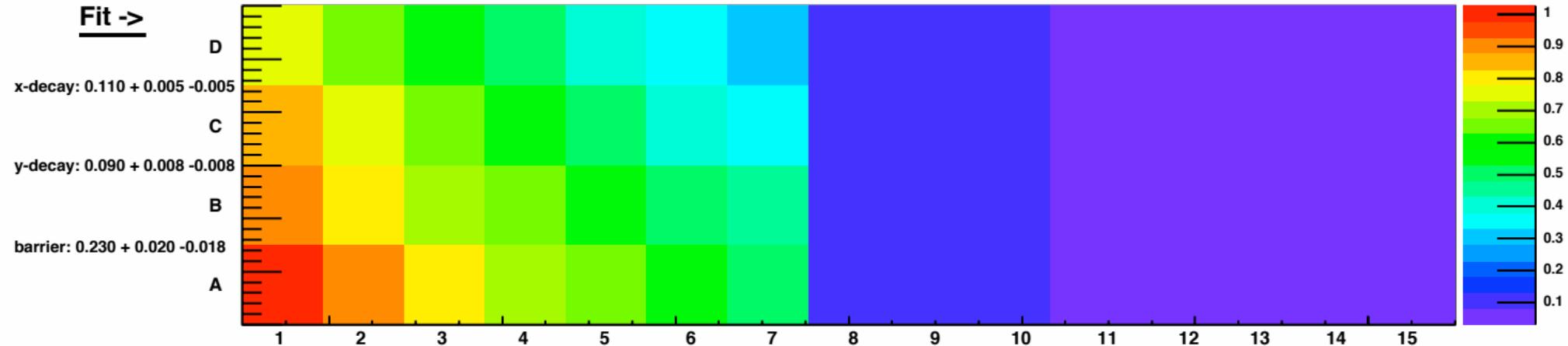


Paddle 13 PMT L

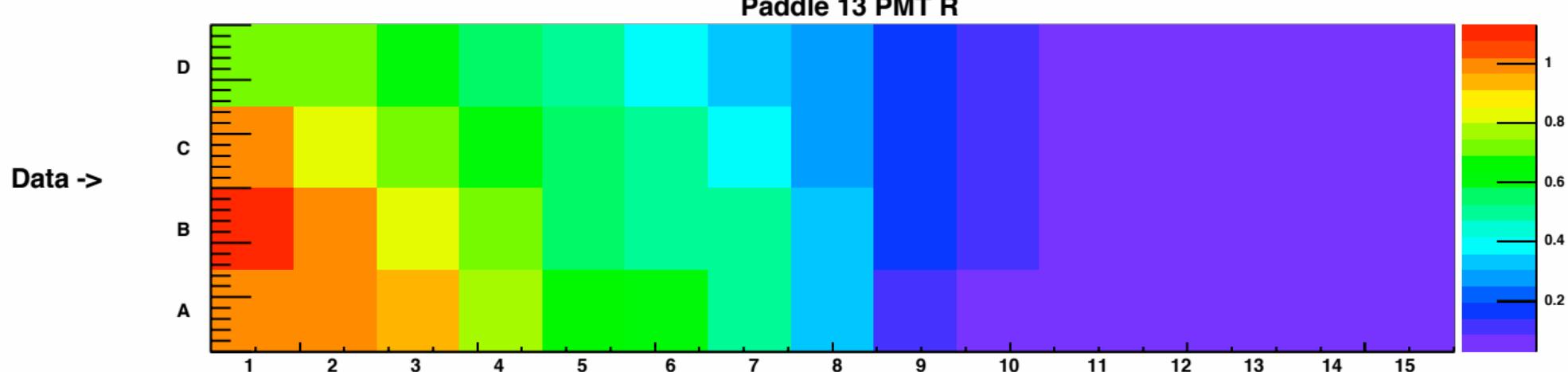


$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.110(\text{xbin} - 1)] + \text{Exp}[-0.090(\text{ybin} - 1)] - 1 \} + 0.230 \theta(\text{xbin}, 9) \text{Exp}[-0.110(\text{xbin} - 1)]$$

Fit ->

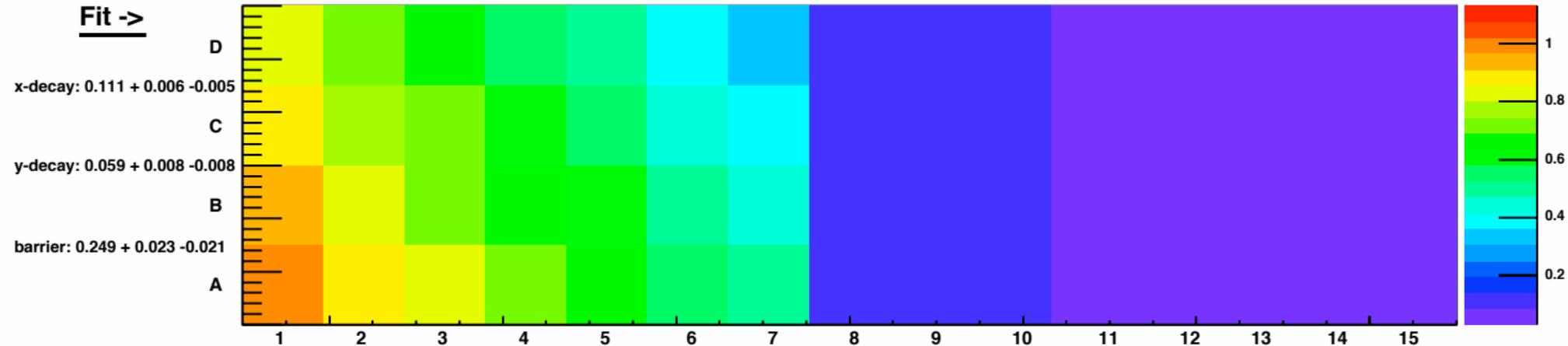


Paddle 13 PMT R



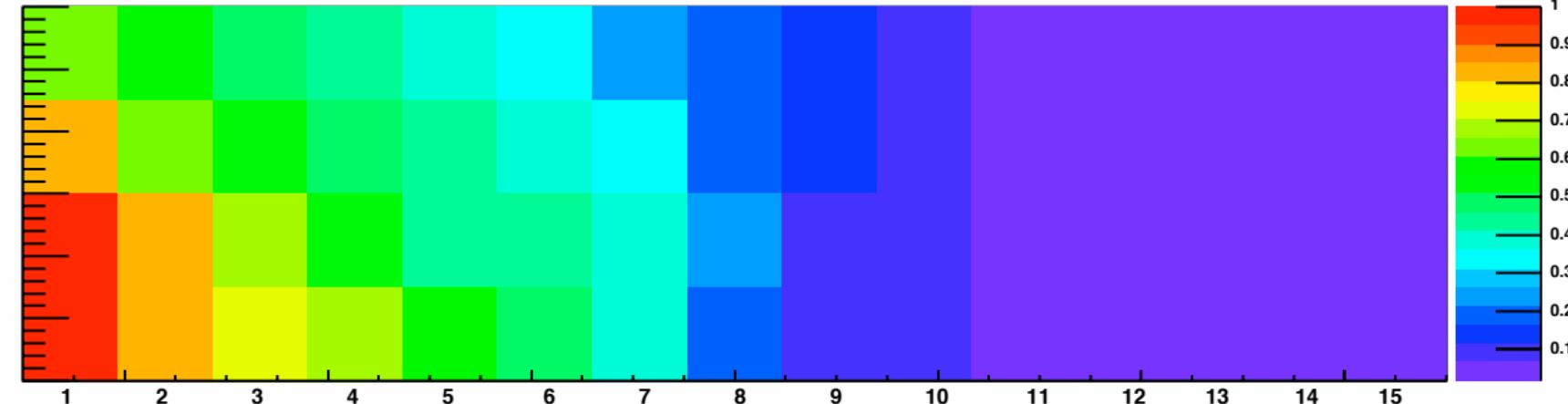
$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.111(\text{xbin} - 1)] + \text{Exp}[-0.059(\text{ybin} - 1)] - 1 \} + 0.249 \theta(\text{xbin}, 9) \text{Exp}[-0.111(\text{xbin} - 1)]$$

Fit ->



Paddle 14 PMT L

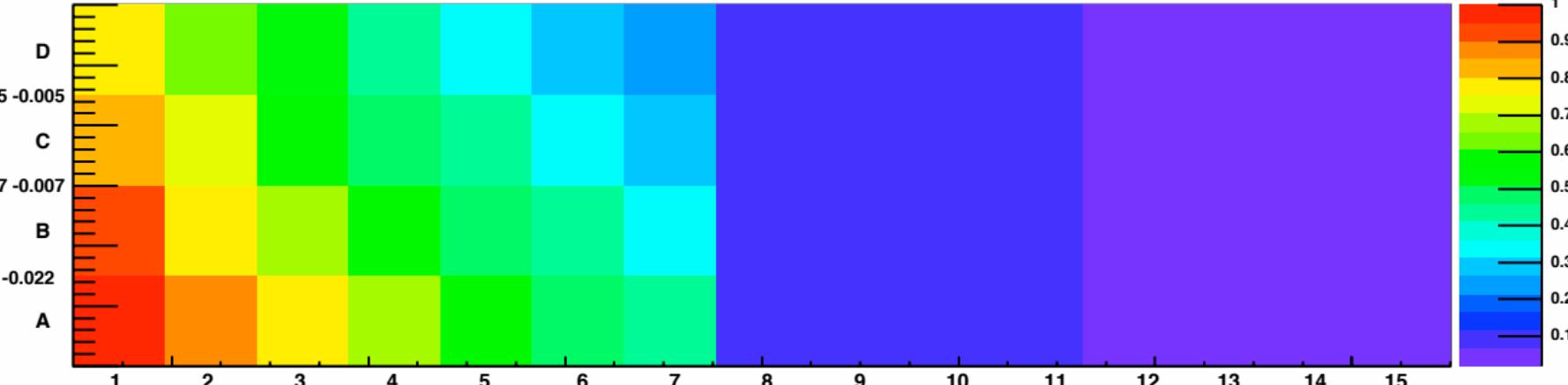
Data ->



Fit ->

$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.138(\text{xbin} - 1)] + \text{Exp}[-0.083(\text{ybin} - 1)] - 1 \} + 0.266 \theta(\text{xbin}, 9) \text{Exp}[-0.138(\text{xbin} - 1)]$$

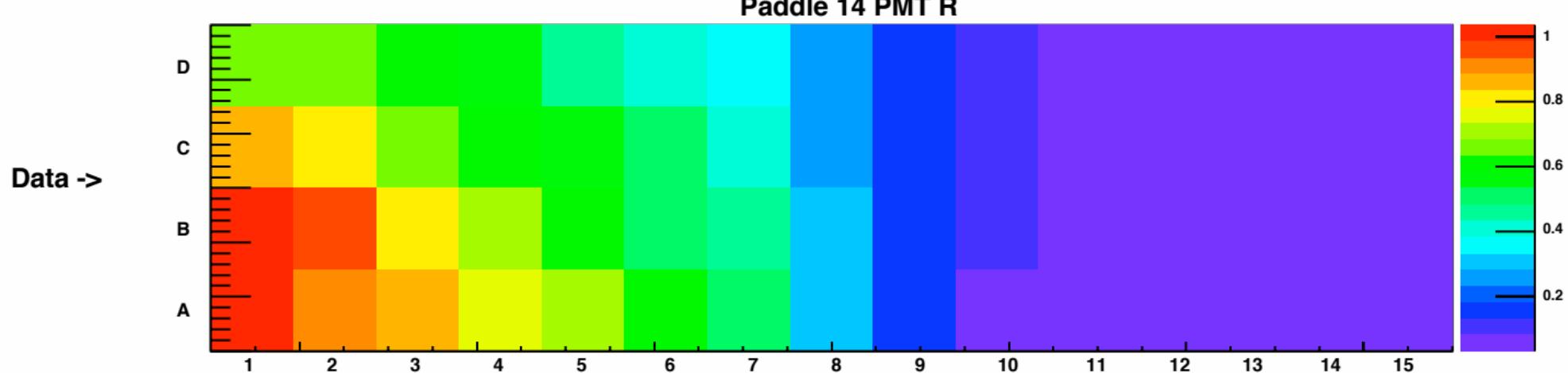
x-decay: $0.138 + 0.005 - 0.005$



y-decay: $0.083 + 0.007 - 0.007$

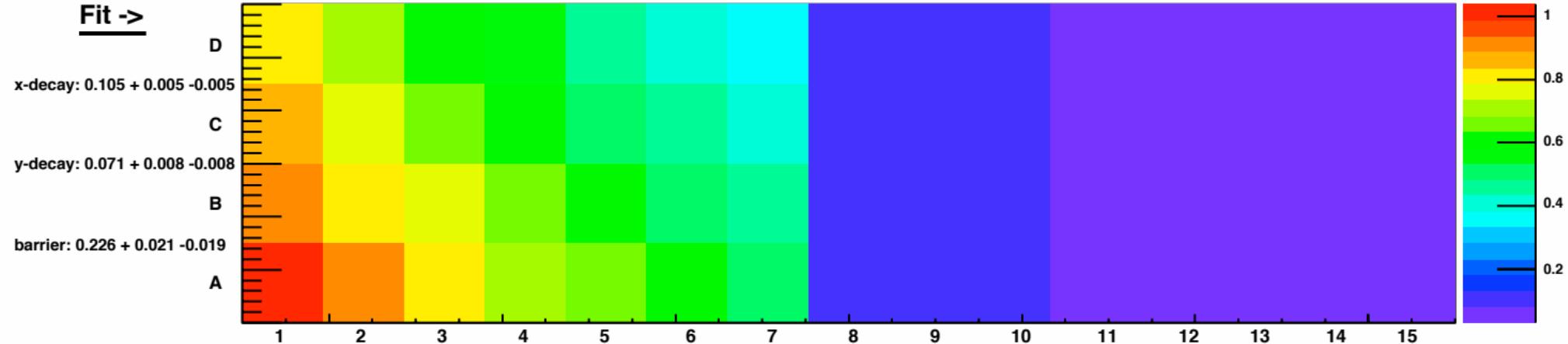
barrier: $0.266 + 0.023 - 0.022$

Paddle 14 PMT R

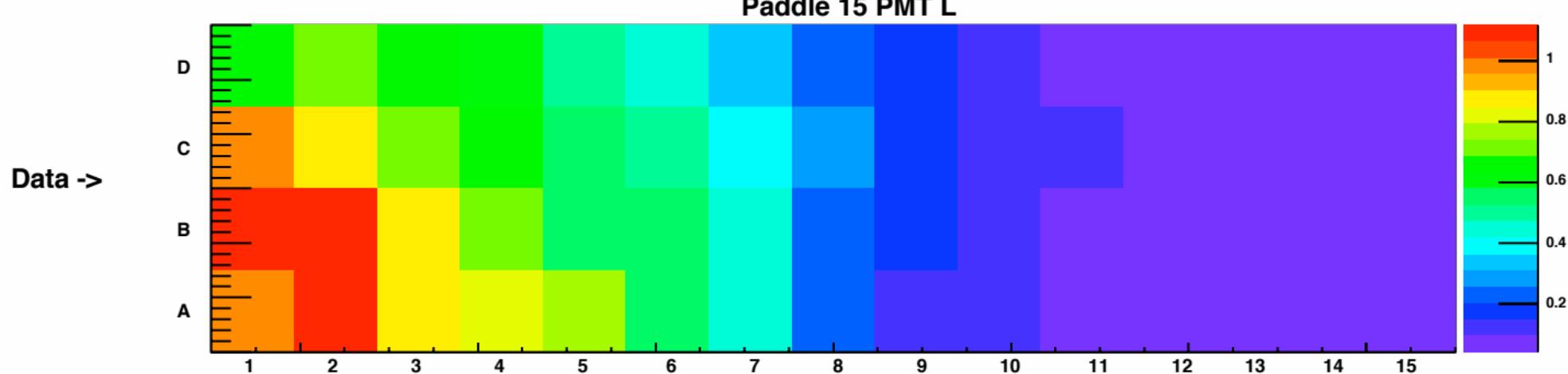


$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.105(\text{xbin} - 1)] + \text{Exp}[-0.071(\text{ybin} - 1)] - 1 \} + 0.226 \theta(\text{xbin}, 9) \text{Exp}[-0.105(\text{xbin} - 1)]$$

Fit ->

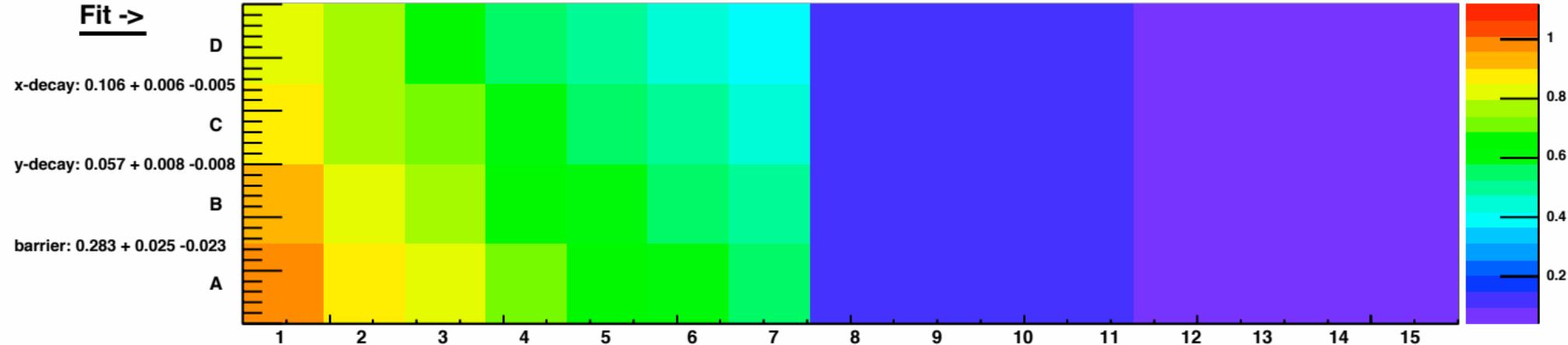


Paddle 15 PMT L

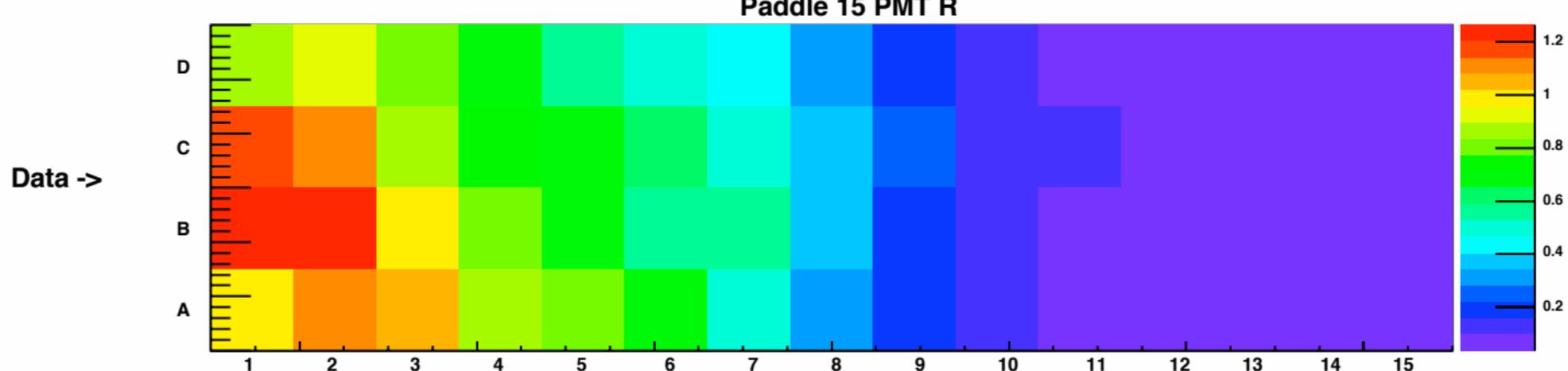


$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.106(\text{xbin} - 1)] + \text{Exp}[-0.057(\text{ybin} - 1)] - 1 \} + 0.283 \theta(\text{xbin}, 9) \text{Exp}[-0.106(\text{xbin} - 1)]$$

Fit ->

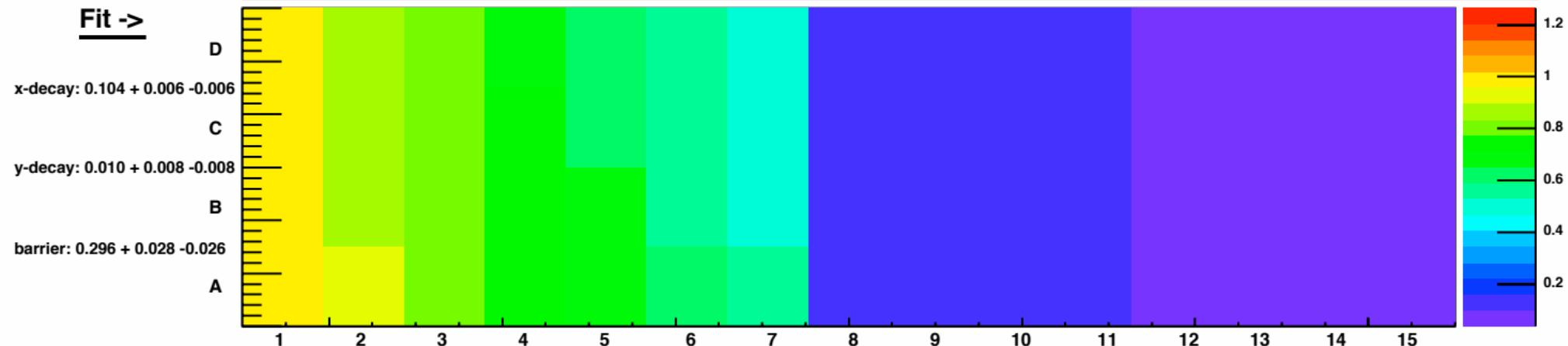


Paddle 15 PMT R

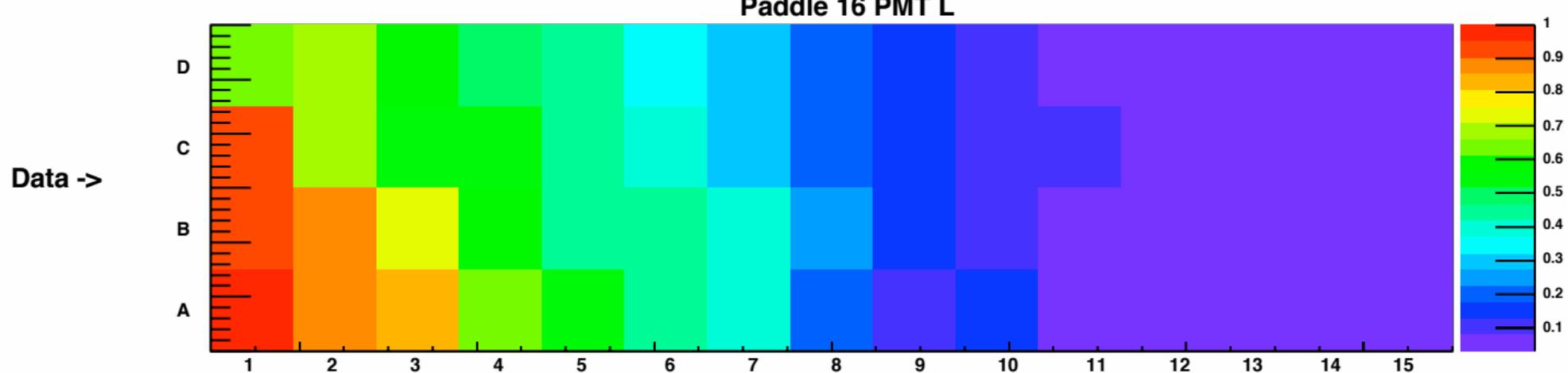


$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.104(\text{xbin} - 1)] + \text{Exp}[-0.010(\text{ybin} - 1)] - 1 \} + 0.296 \theta(\text{xbin}, 9) \text{Exp}[-0.104(\text{xbin} - 1)]$$

Fit ->

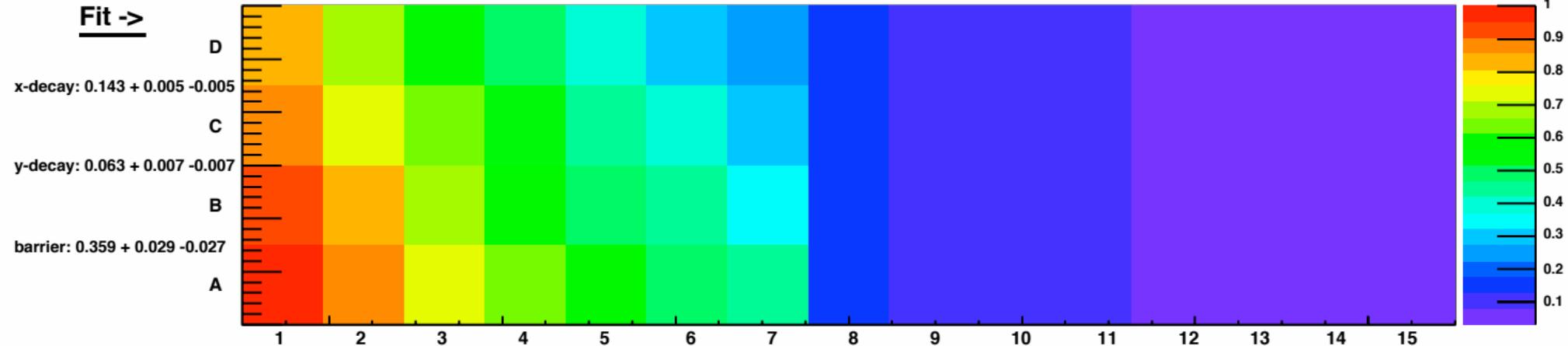


Paddle 16 PMT L

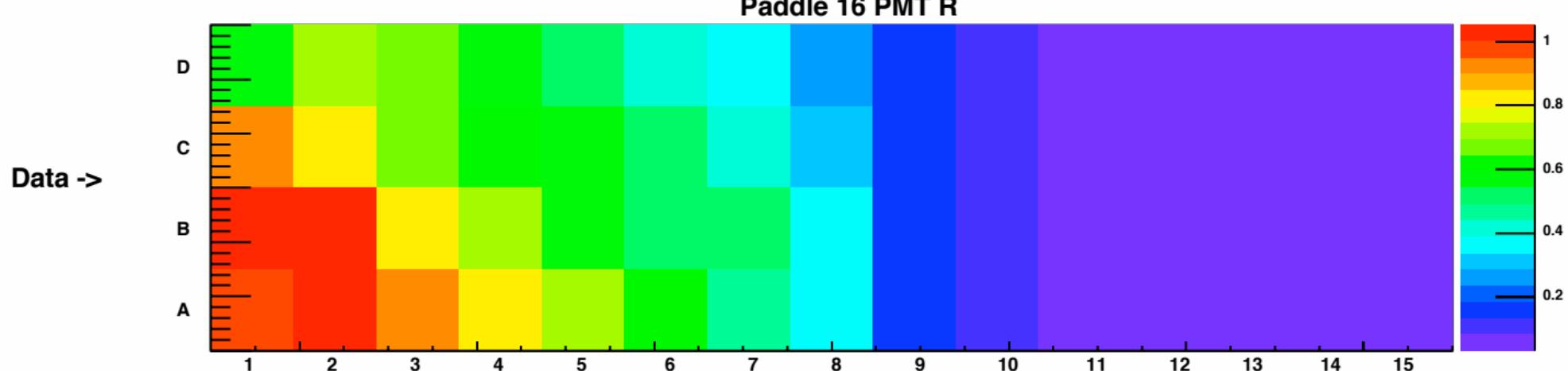


$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.143(\text{xbin} - 1)] + \text{Exp}[-0.063(\text{ybin} - 1)] - 1 \} + 0.359 \theta(\text{xbin}, 9) \text{Exp}[-0.143(\text{xbin} - 1)]$$

Fit ->

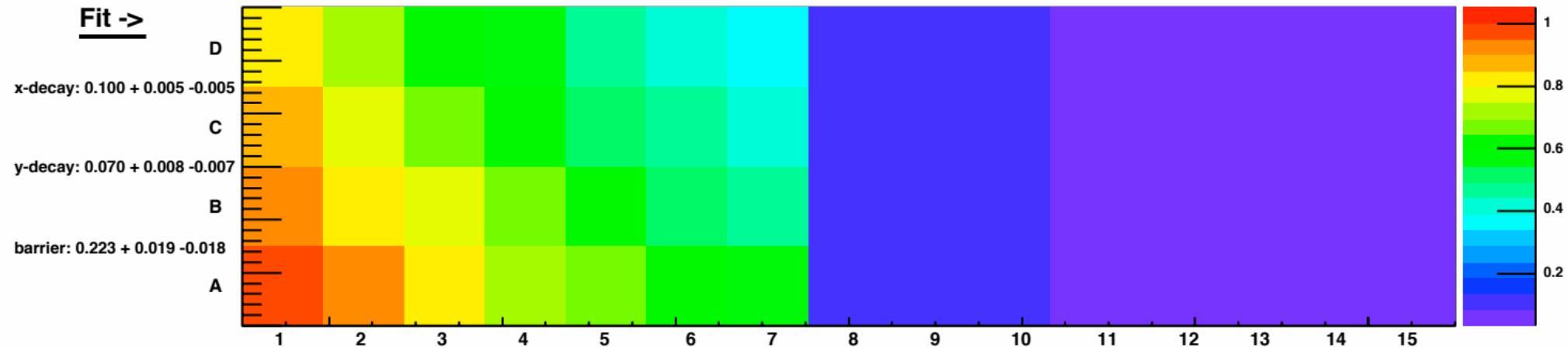


Paddle 16 PMT R

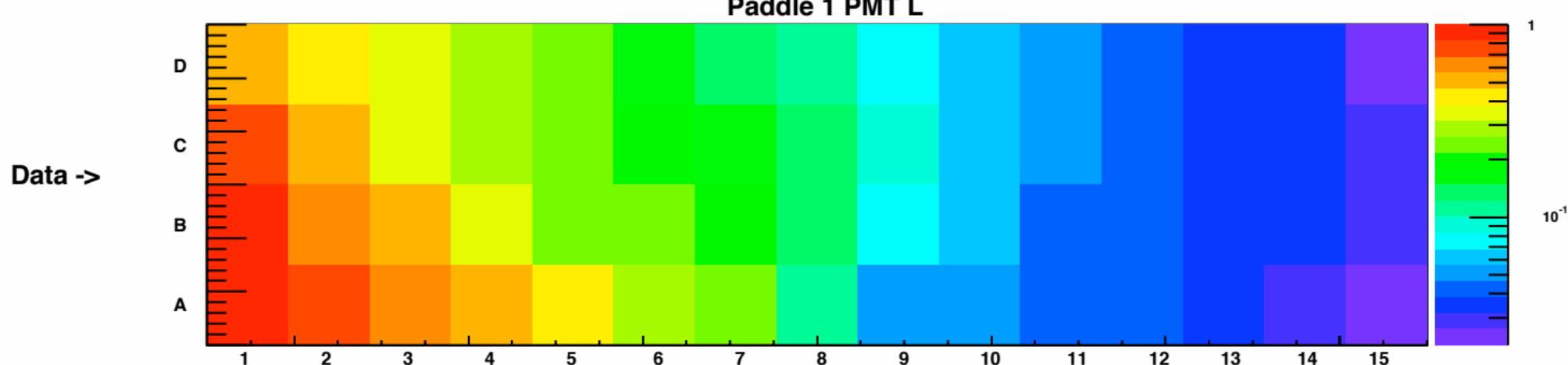


$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.100(\text{xbin} - 1)] + \text{Exp}[-0.070(\text{ybin} - 1)] - 1 \} + 0.223 \theta(\text{xbin}, 9) \text{Exp}[-0.100(\text{xbin} - 1)]$$

Fit ->

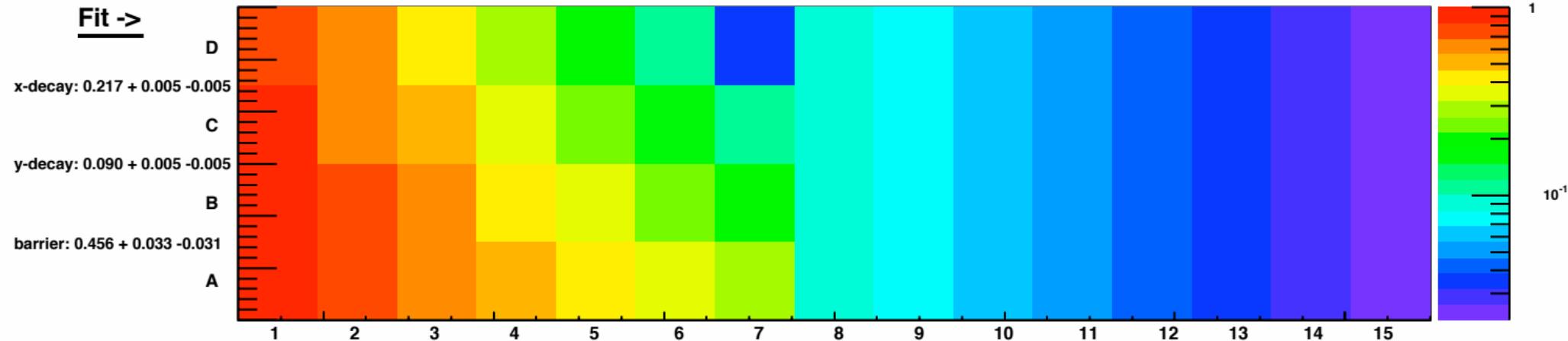


Paddle 1 PMT L

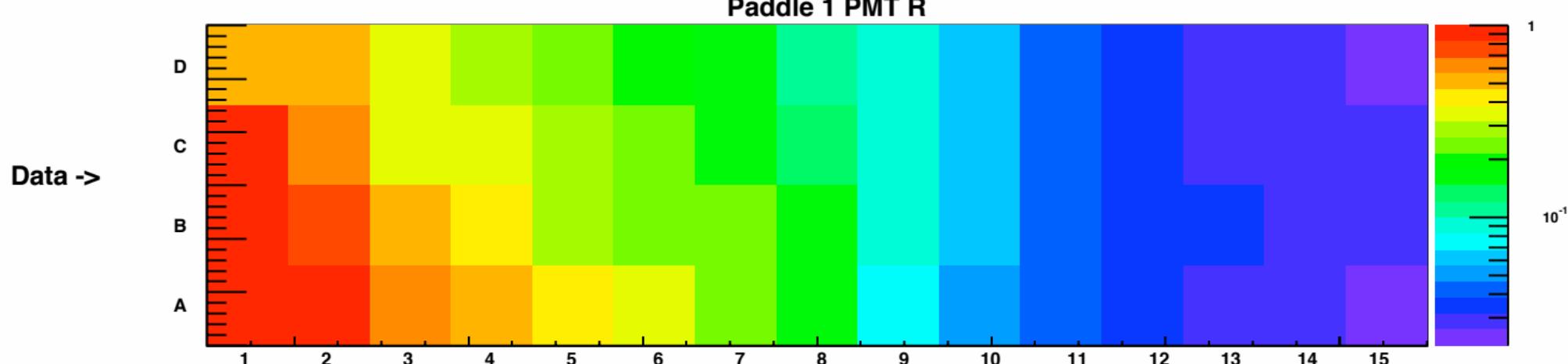


$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.217(\text{xbin} - 1)] + \text{Exp}[-0.090(\text{ybin} - 1)] - 1 \} + 0.456 \theta(\text{xbin}, 9) \text{Exp}[-0.217(\text{xbin} - 1)]$$

Fit ->

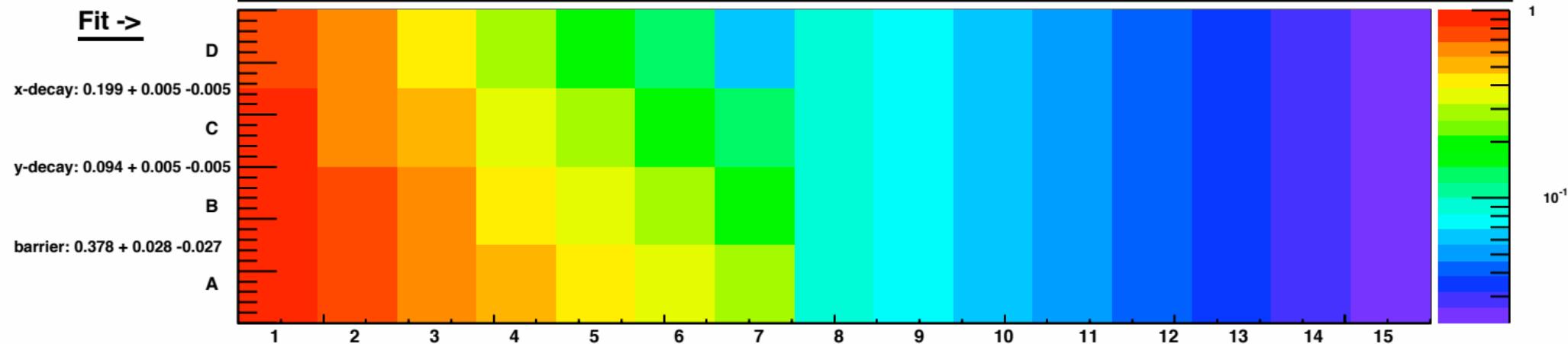


Paddle 1 PMT R

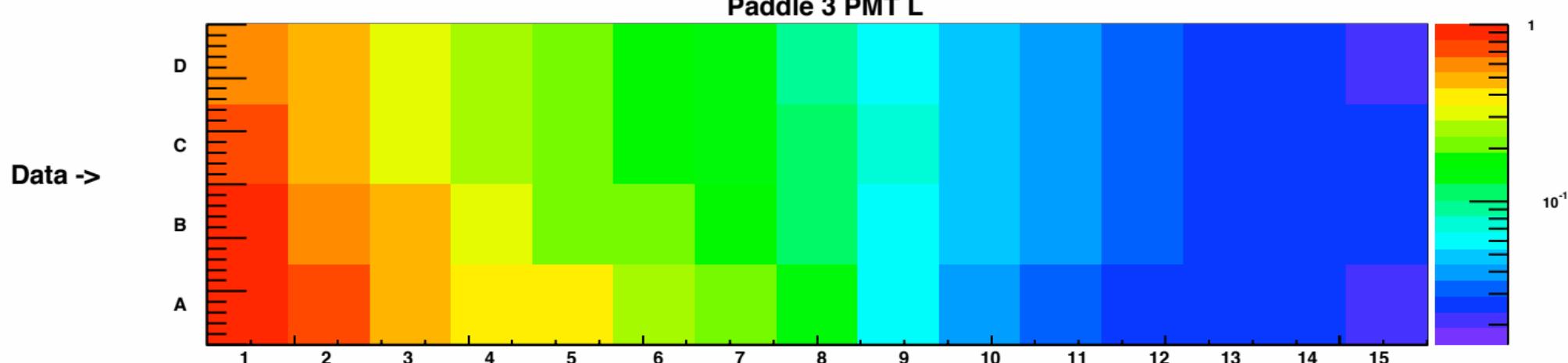


$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.199(\text{xbin} - 1)] + \text{Exp}[-0.094(\text{ybin} - 1)] - 1 \} + 0.378 \theta(\text{xbin}, 9) \text{Exp}[-0.199(\text{xbin} - 1)]$$

Fit ->

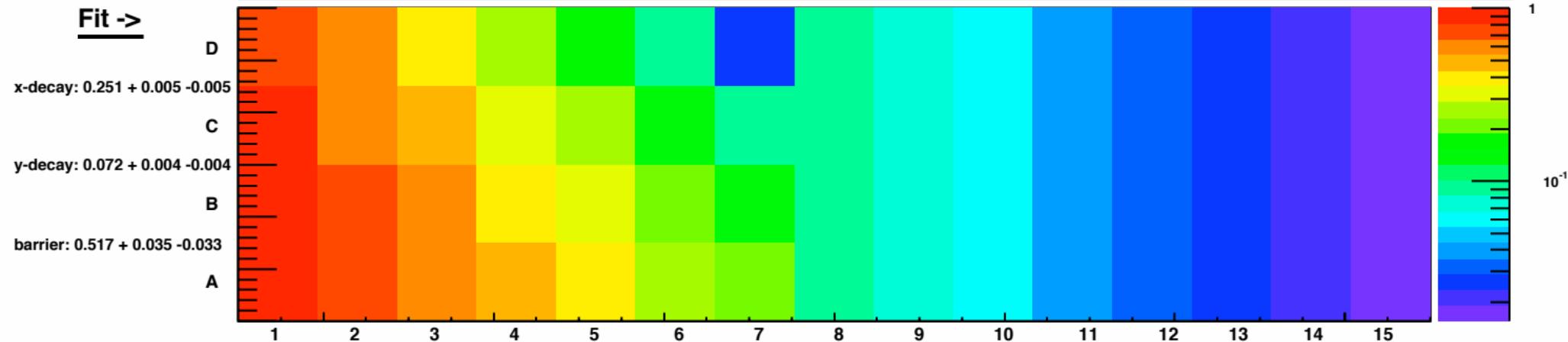


Paddle 3 PMT L

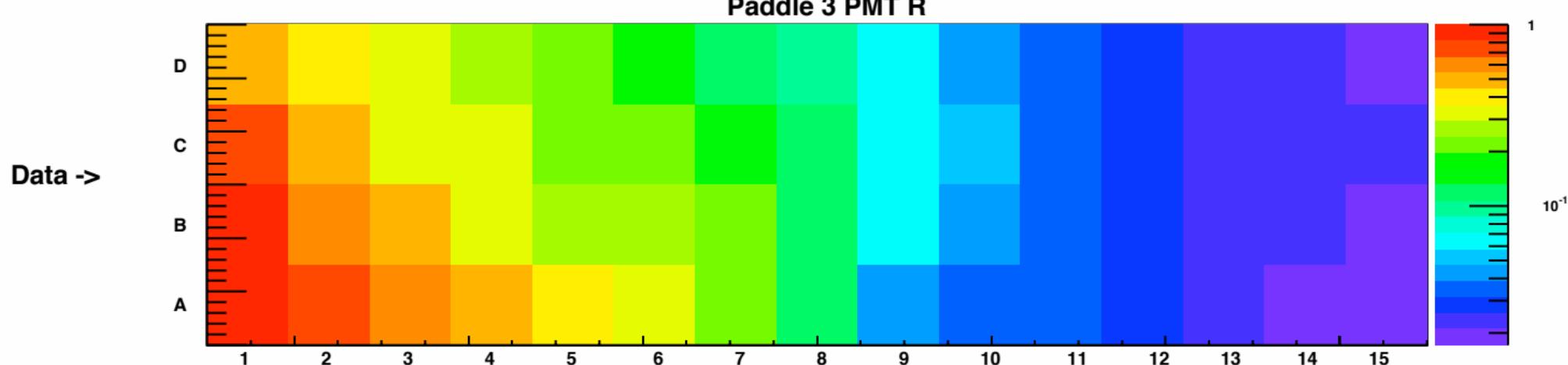


$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.251(\text{xbin} - 1)] + \text{Exp}[-0.072(\text{ybin} - 1)] - 1 \} + 0.517 \theta(\text{xbin}, 9) \text{Exp}[-0.251(\text{xbin} - 1)]$$

Fit ->

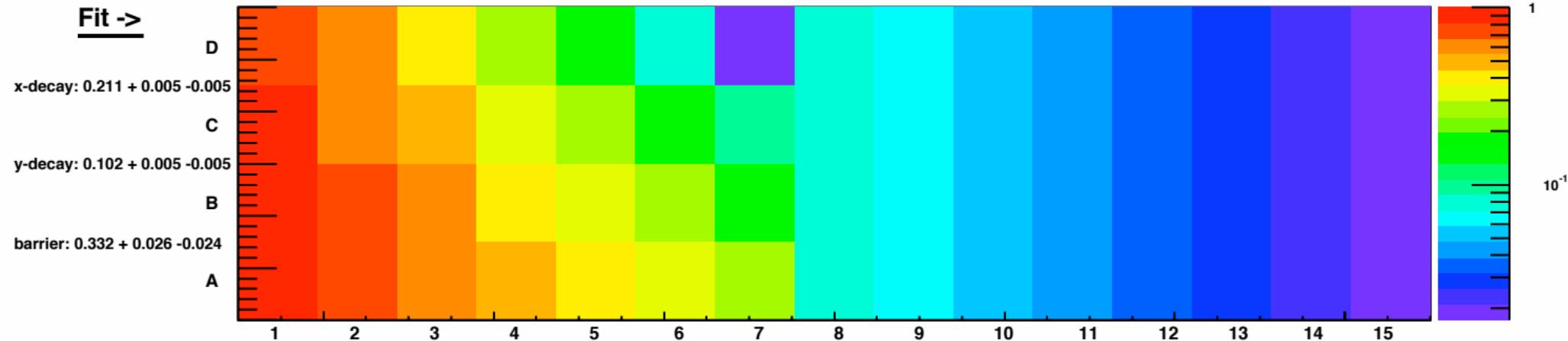


Paddle 3 PMT R



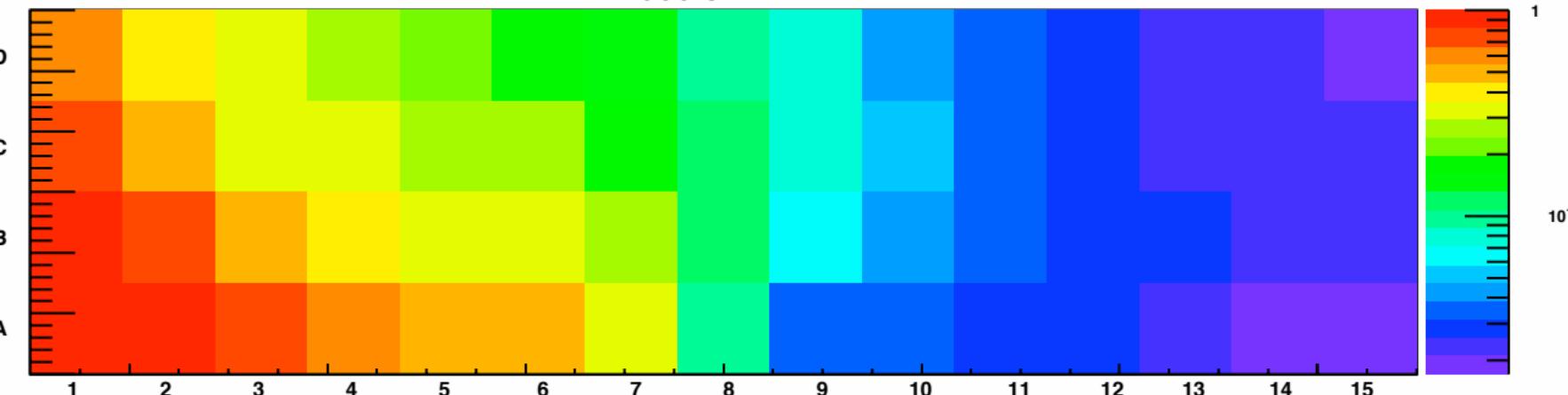
$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.211(\text{xbin} - 1)] + \text{Exp}[-0.102(\text{ybin} - 1)] - 1 \} + 0.332 \theta(\text{xbin}, 9) \text{Exp}[-0.211(\text{xbin} - 1)]$$

Fit ->



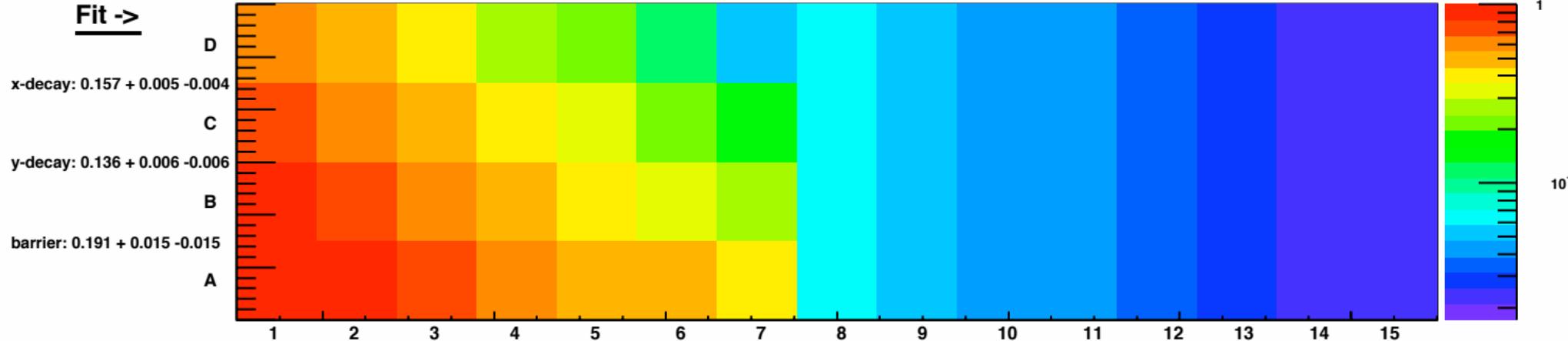
Paddle 4 PMT L

Data ->

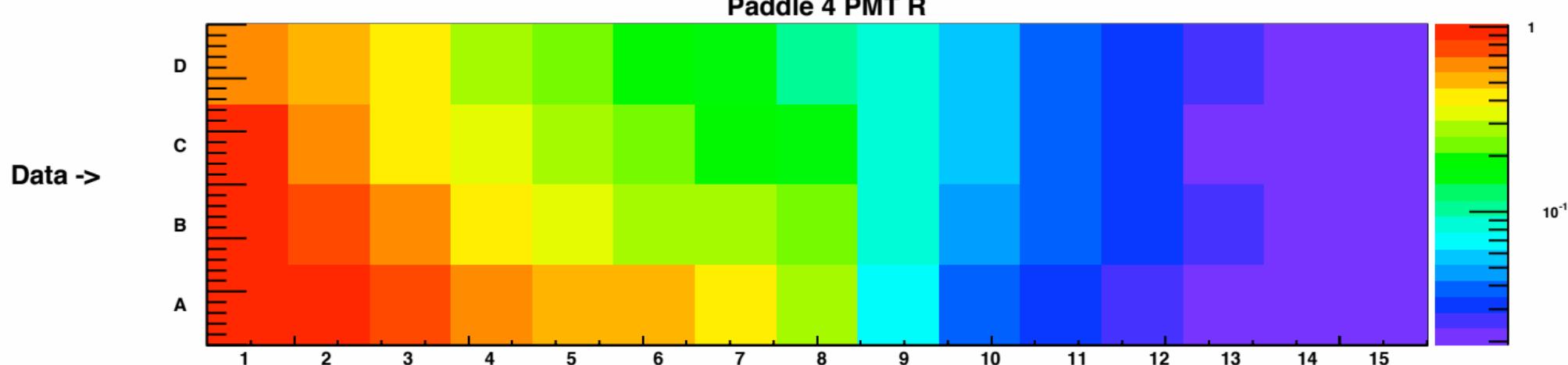


$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.157(\text{xbin} - 1)] + \text{Exp}[-0.136(\text{ybin} - 1)] - 1 \} + 0.191 \theta(\text{xbin}, 9) \text{Exp}[-0.157(\text{xbin} - 1)]$$

Fit ->

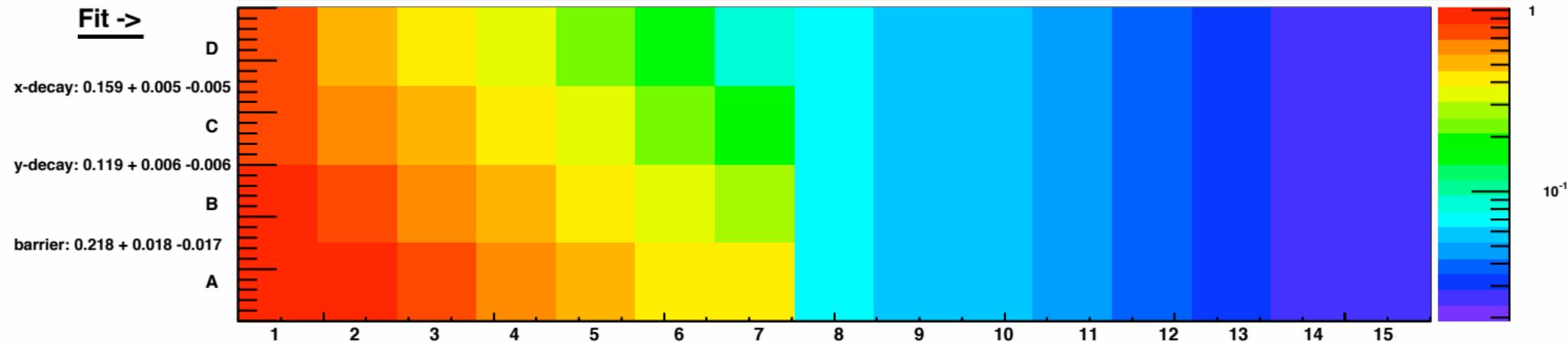


Paddle 4 PMT R

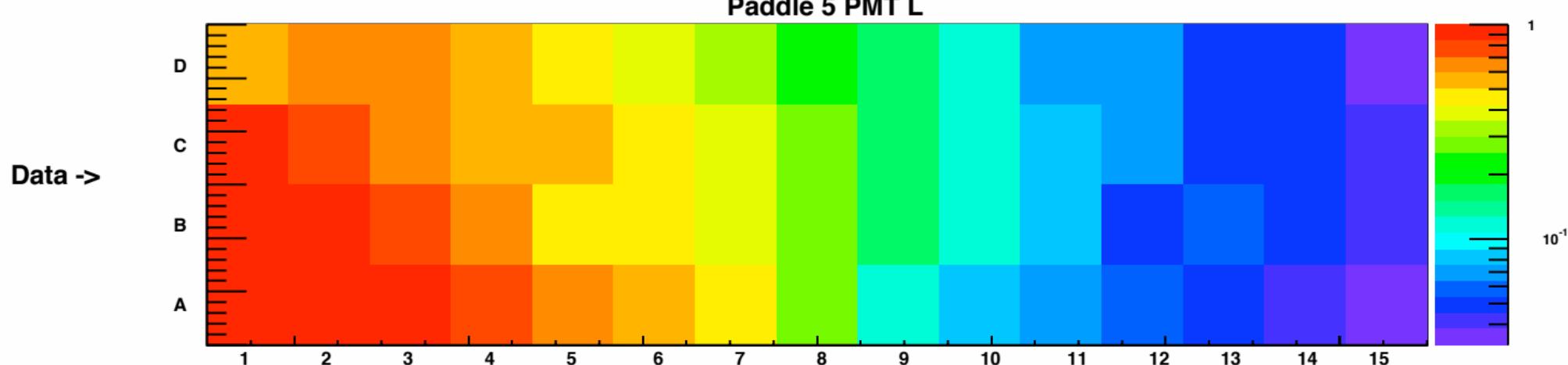


$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.159(\text{xbin} - 1)] + \text{Exp}[-0.119(\text{ybin} - 1)] - 1 \} + 0.218 \theta(\text{xbin}, 9) \text{Exp}[-0.159(\text{xbin} - 1)]$$

Fit ->

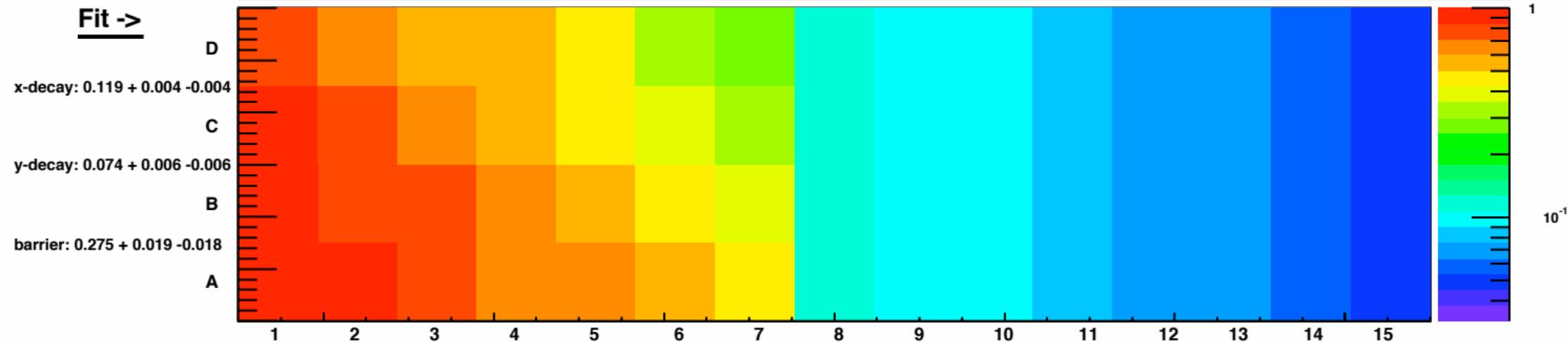


Paddle 5 PMT L

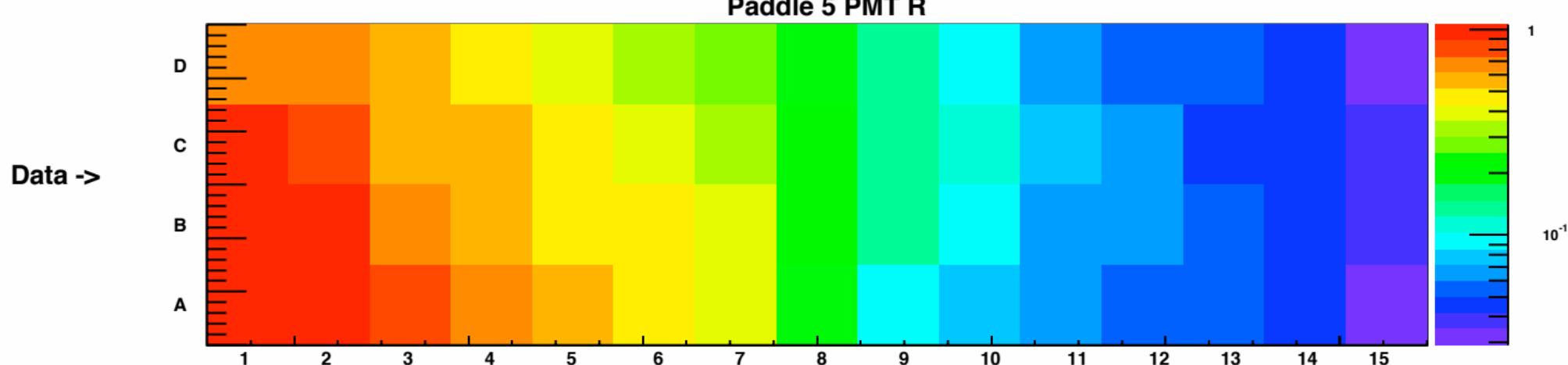


$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.119(\text{xbin} - 1)] + \text{Exp}[-0.074(\text{ybin} - 1)] - 1 \} + 0.275 \theta(\text{xbin}, 9) \text{Exp}[-0.119(\text{xbin} - 1)]$$

Fit ->

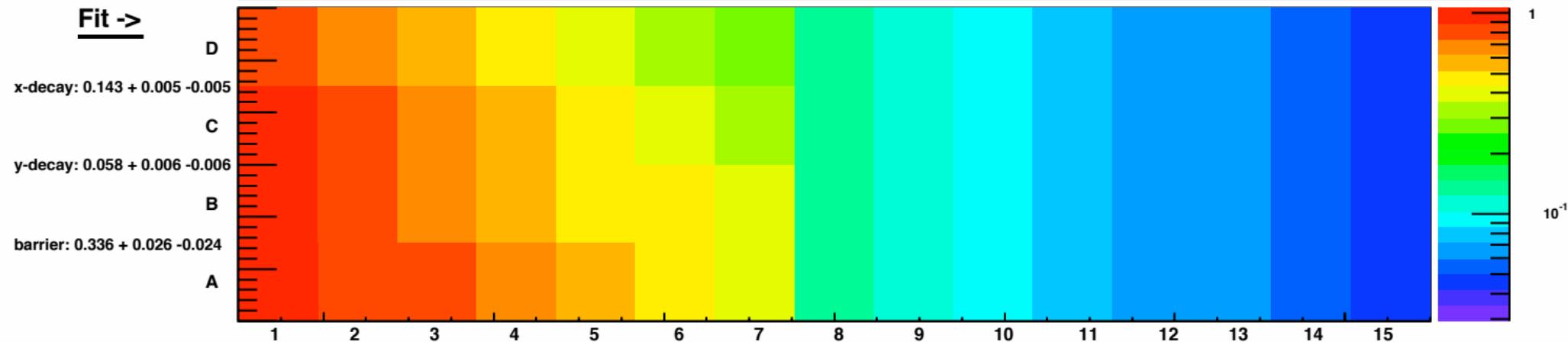


Paddle 5 PMT R



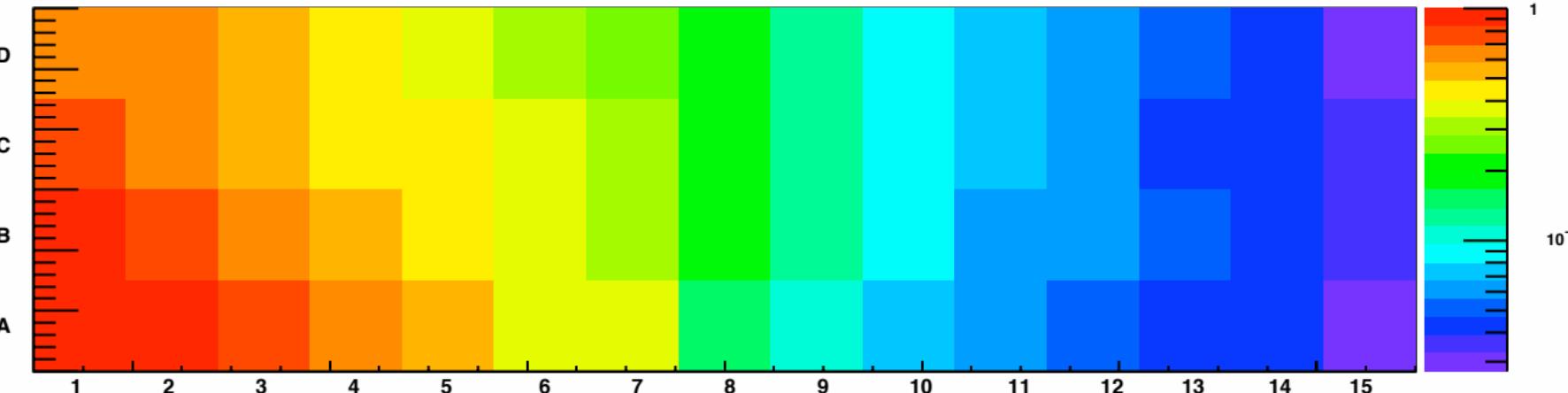
$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.143(\text{xbin} - 1)] + \text{Exp}[-0.058(\text{ybin} - 1)] - 1 \} + 0.336 \theta(\text{xbin}, 9) \text{Exp}[-0.143(\text{xbin} - 1)]$$

Fit ->



Paddle 7 PMT L

Data ->



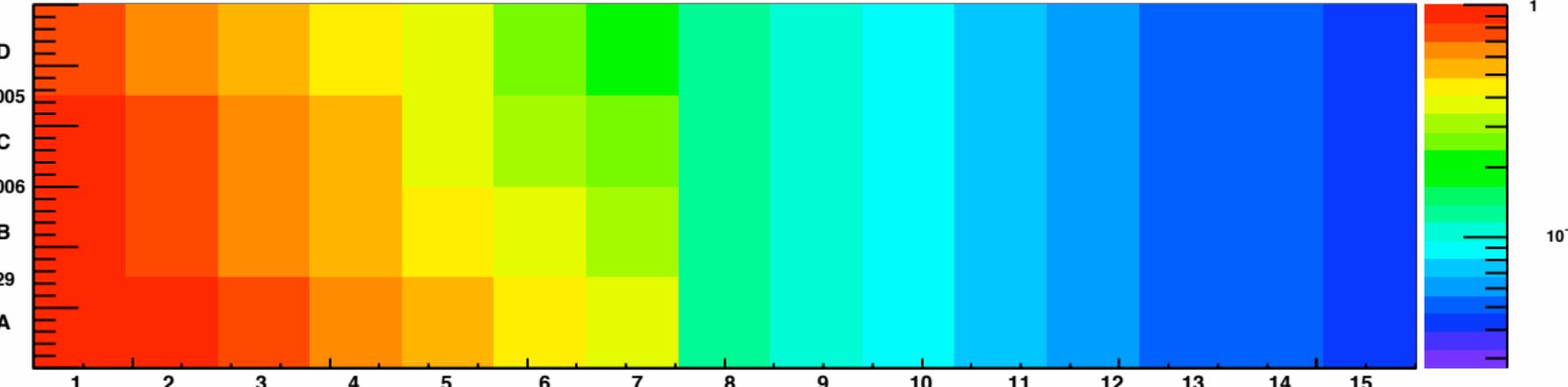
$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.159(\text{xbin} - 1)] + \text{Exp}[-0.067(\text{ybin} - 1)] - 1 \} + 0.370 \theta(\text{xbin}, 9) \text{Exp}[-0.159(\text{xbin} - 1)]$$

Fit ->

x-decay: $0.159 + 0.006 - 0.005$

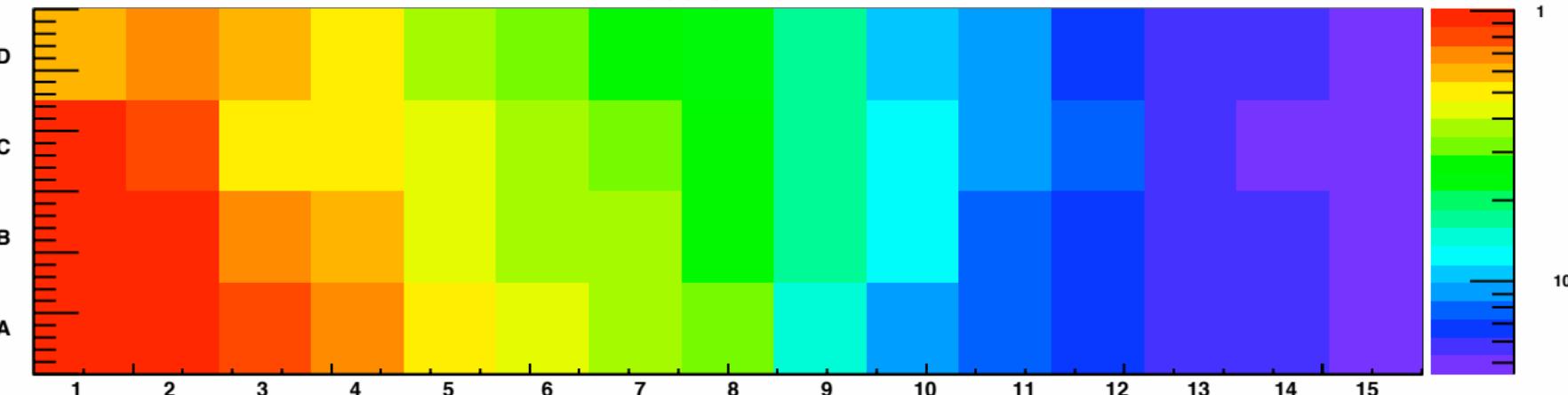
y-decay: $0.067 + 0.006 - 0.006$

barrier: $0.370 + 0.031 - 0.029$



Paddle 7 PMT R

Data ->



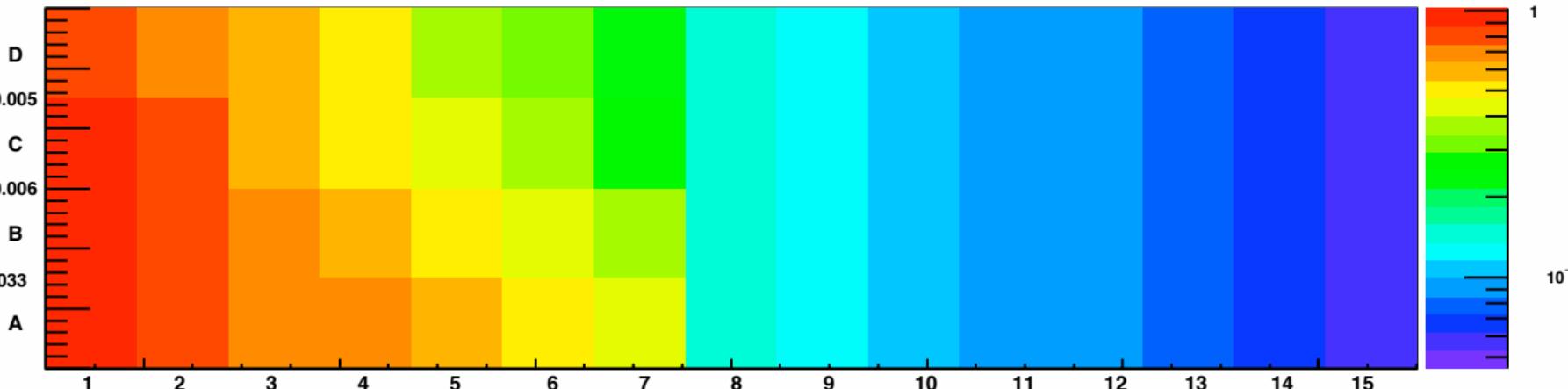
$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.150(\text{xbin} - 1)] + \text{Exp}[-0.061(\text{ybin} - 1)] - 1 \} + 0.439 \theta(\text{xbin}, 9) \text{Exp}[-0.150(\text{xbin} - 1)]$$

Fit ->

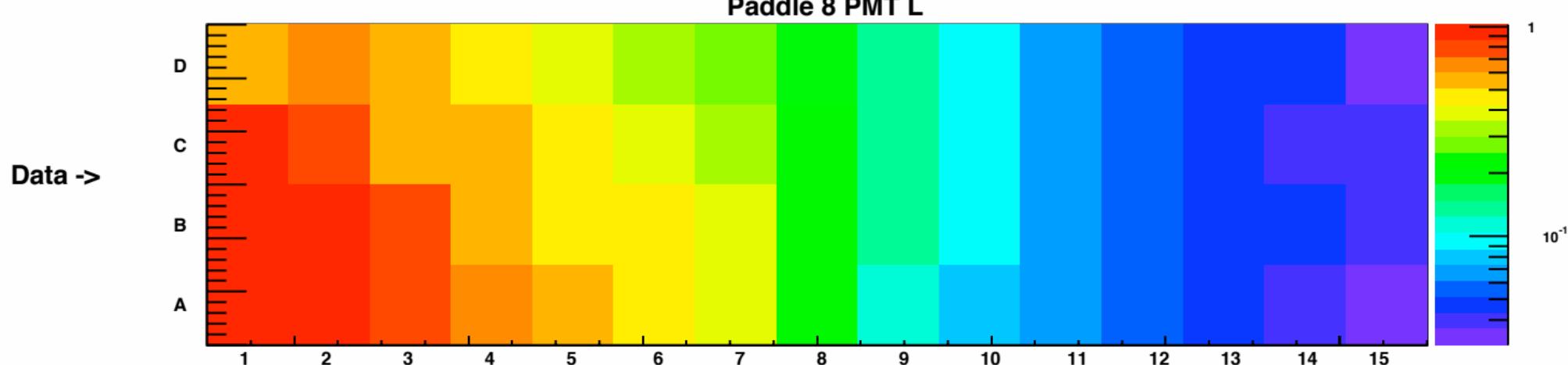
x-decay: $0.150 + 0.005 - 0.005$

y-decay: $0.061 + 0.007 - 0.006$

barrier: $0.439 + 0.035 - 0.033$

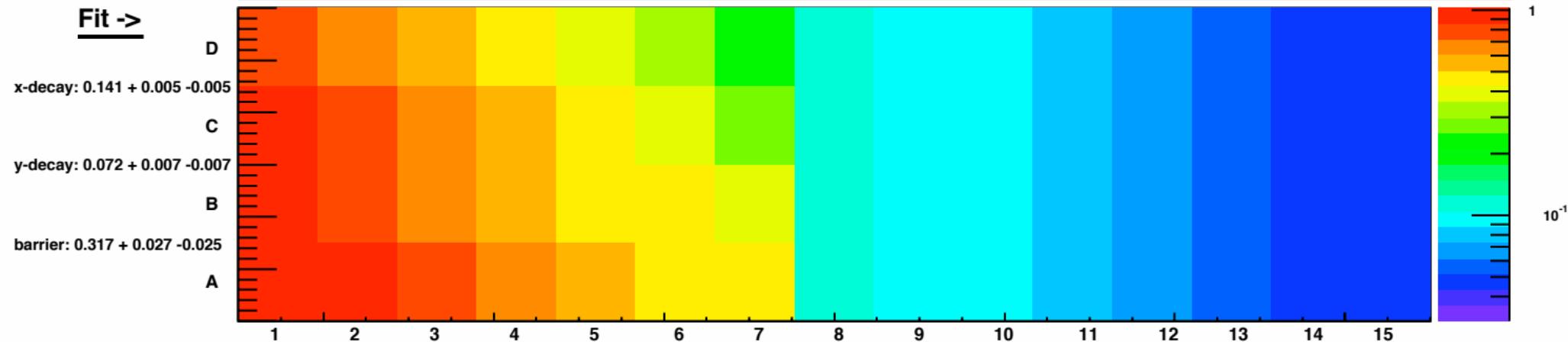


Paddle 8 PMT L



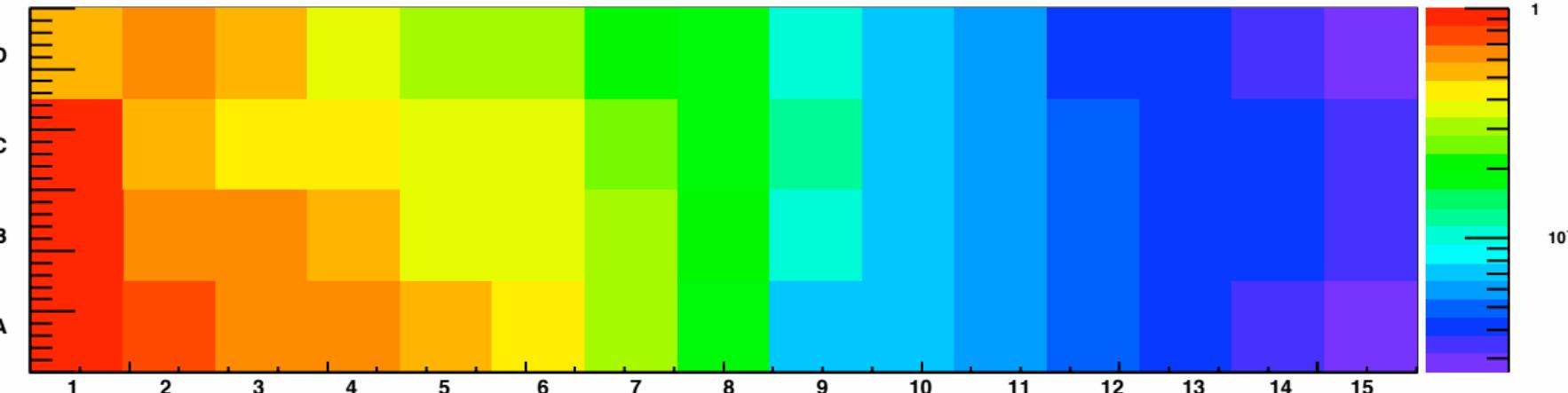
$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.141(\text{xbin} - 1)] + \text{Exp}[-0.072(\text{ybin} - 1)] - 1 \} + 0.317 \theta(\text{xbin}, 9) \text{Exp}[-0.141(\text{xbin} - 1)]$$

Fit ->



Paddle 8 PMT R

Data ->



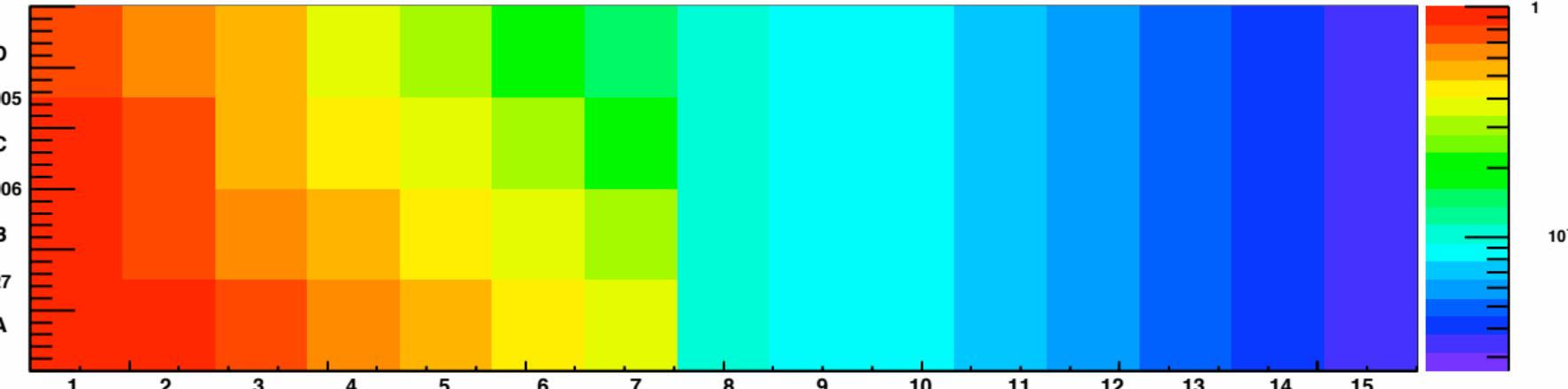
$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.163(\text{xbin} - 1)] + \text{Exp}[-0.082(\text{ybin} - 1)] - 1 \} + 0.338 \theta(\text{xbin}, 9) \text{Exp}[-0.163(\text{xbin} - 1)]$$

Fit ->

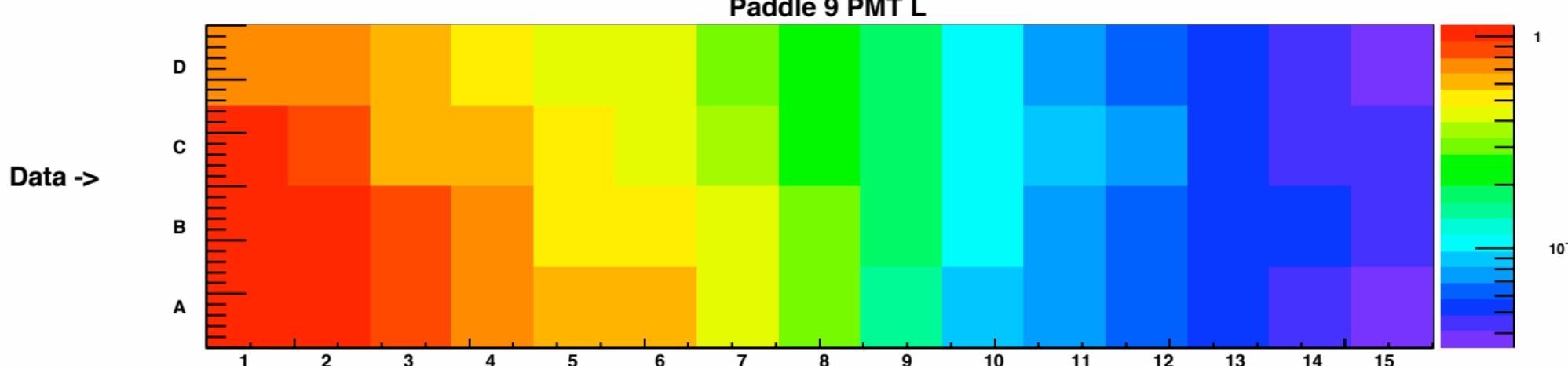
x-decay: $0.163 + 0.006 - 0.005$

y-decay: $0.082 + 0.007 - 0.006$

barrier: $0.338 + 0.029 - 0.027$

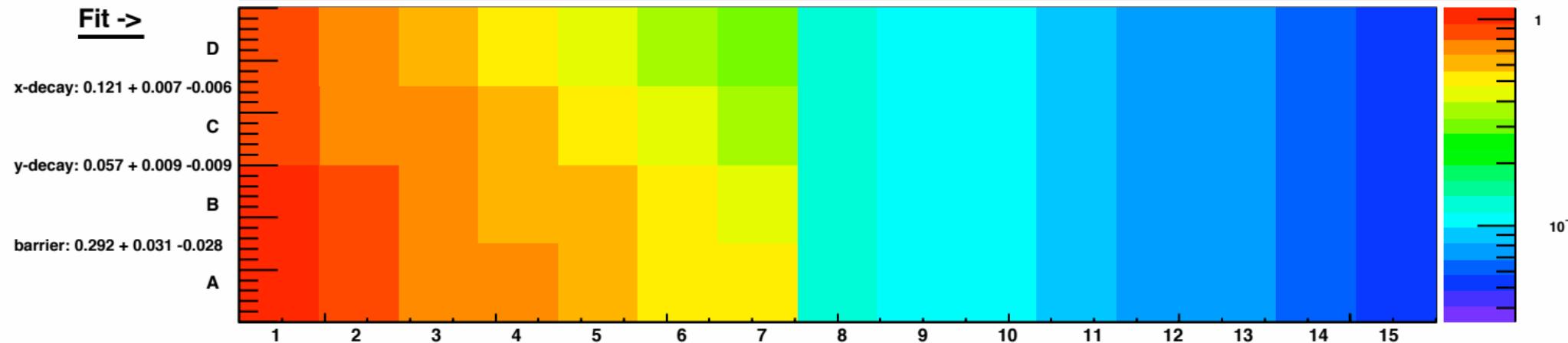


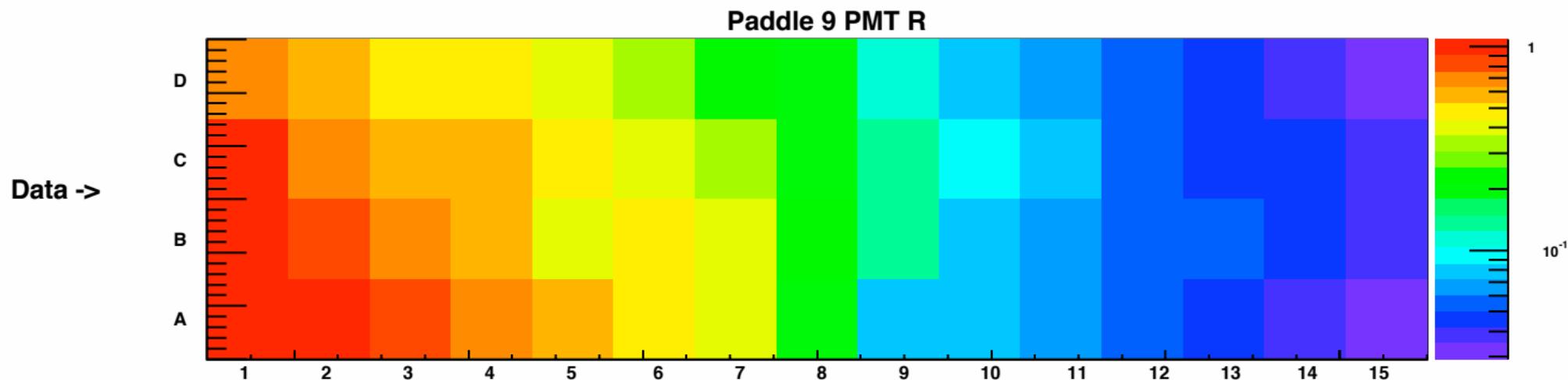
Paddle 9 PMT L



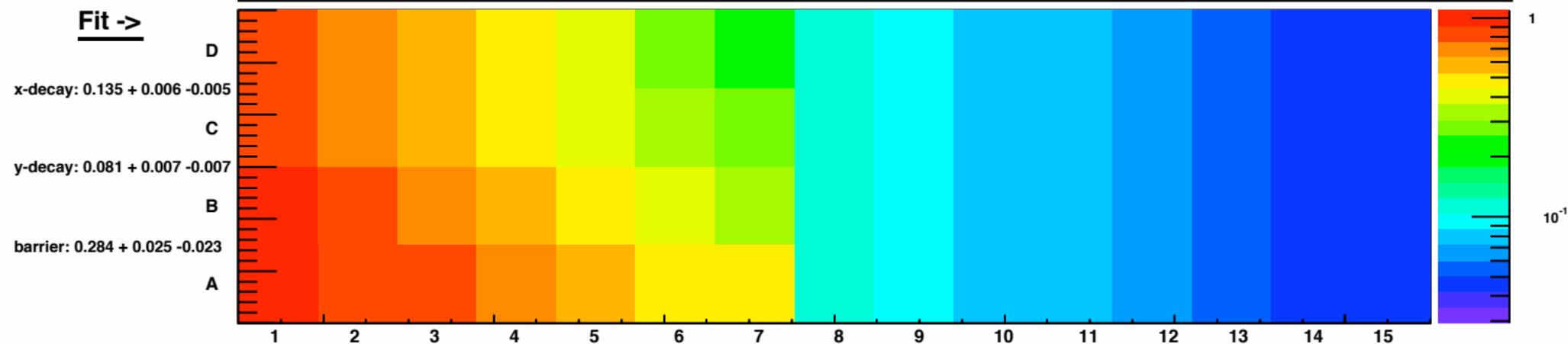
$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.121(\text{xbin} - 1)] + \text{Exp}[-0.057(\text{ybin} - 1)] - 1 \} + 0.292 \theta(\text{xbin}, 9) \text{Exp}[-0.121(\text{xbin} - 1)]$$

Fit ->

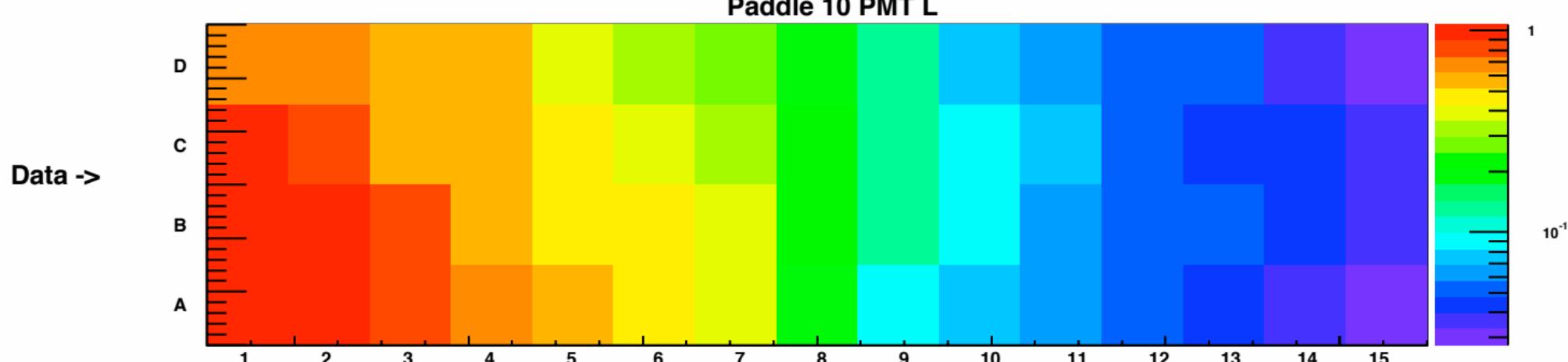




$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.135(\text{xbin} - 1)] + \text{Exp}[-0.081(\text{ybin} - 1)] - 1 \} + 0.284 \theta(\text{xbin}, 9) \text{Exp}[-0.135(\text{xbin} - 1)]$$

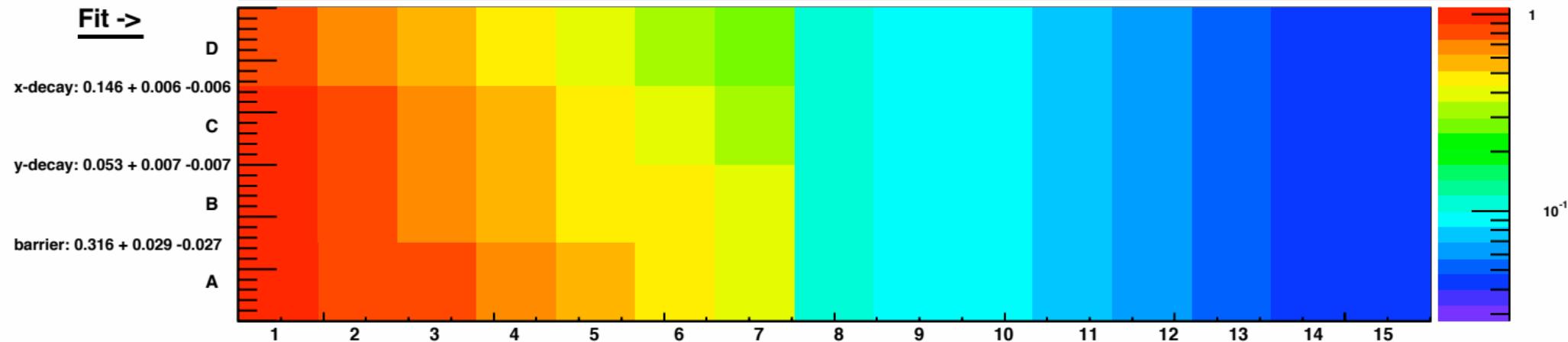


Paddle 10 PMT L

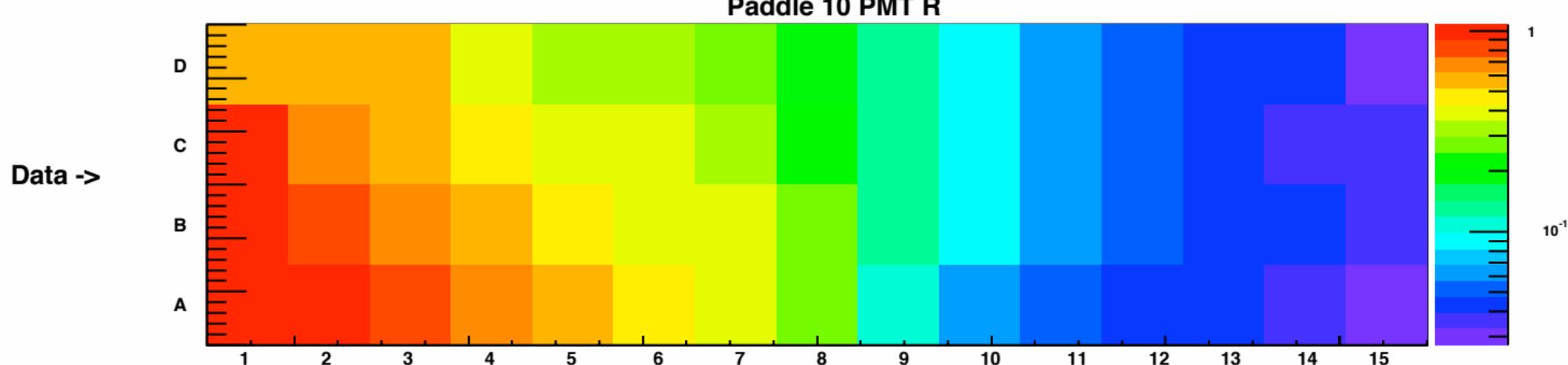


$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.146(\text{xbin} - 1)] + \text{Exp}[-0.053(\text{ybin} - 1)] - 1 \} + 0.316 \theta(\text{xbin}, 9) \text{Exp}[-0.146(\text{xbin} - 1)]$$

Fit ->

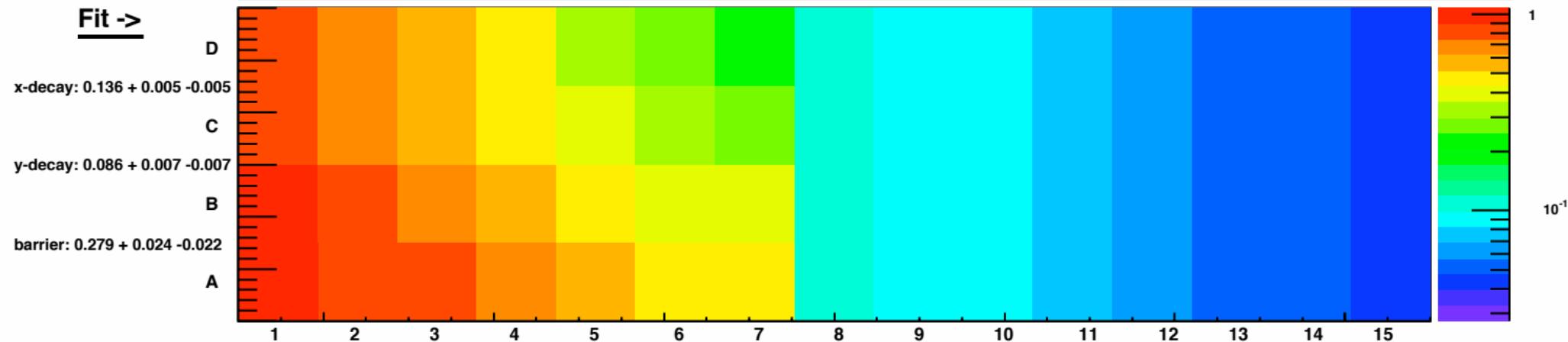


Paddle 10 PMT R



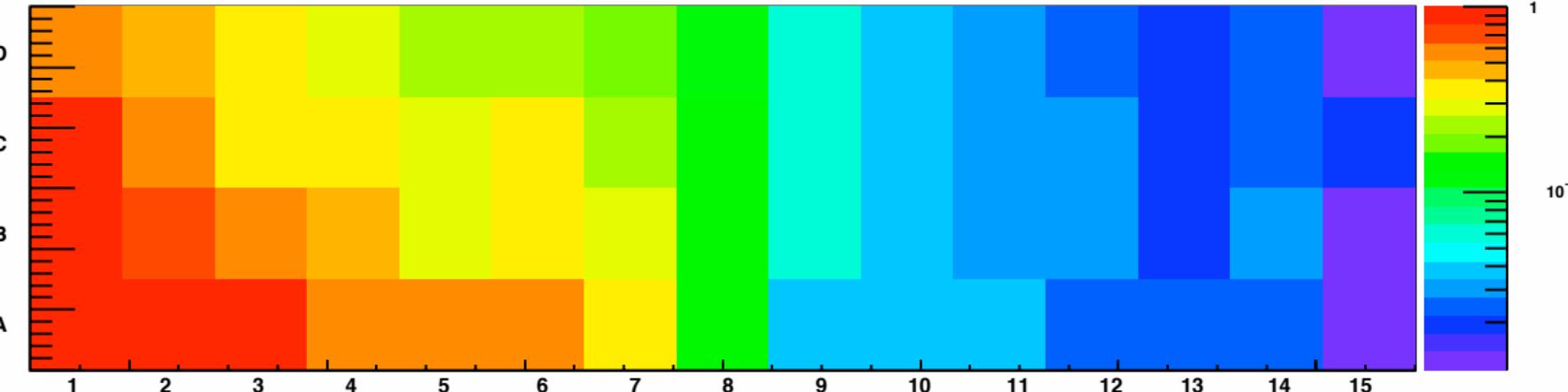
$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.136(\text{xbin} - 1)] + \text{Exp}[-0.086(\text{ybin} - 1)] - 1 \} + 0.279 \theta(\text{xbin}, 9) \text{Exp}[-0.136(\text{xbin} - 1)]$$

Fit ->



Paddle 11 PMT L

Data ->



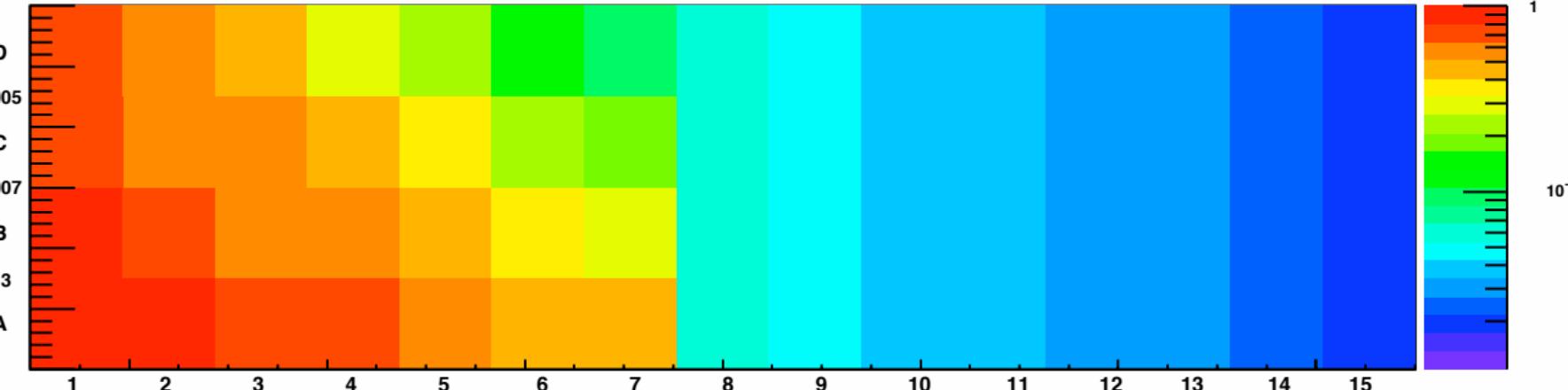
Fit ->

$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.138(\text{xbin} - 1)] + \text{Exp}[-0.143(\text{ybin} - 1)] - 1 \} + 0.144 \theta(\text{xbin}, 9) \text{Exp}[-0.138(\text{xbin} - 1)]$$

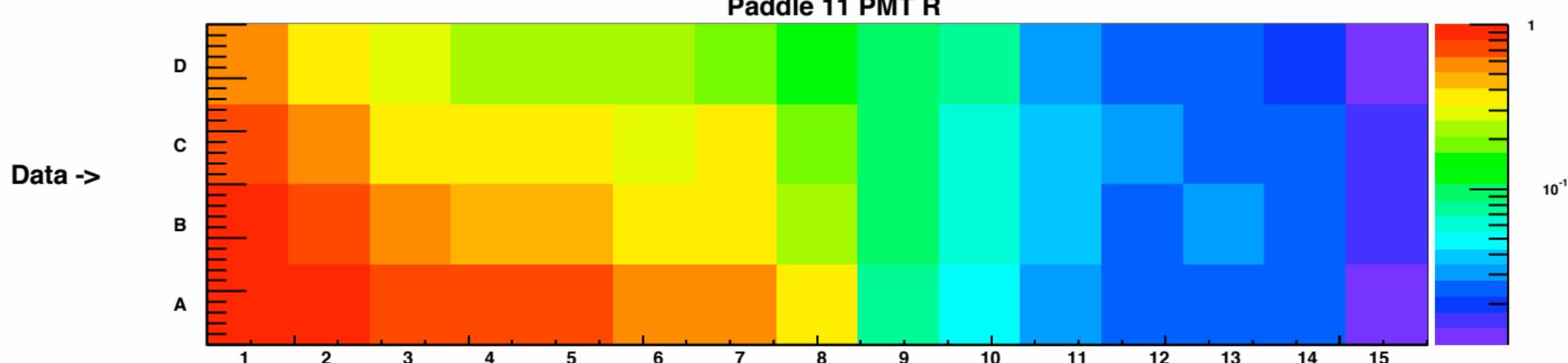
x-decay: $0.138 + 0.005 - 0.005$

y-decay: $0.143 + 0.008 - 0.007$

barrier: $0.144 + 0.014 - 0.013$

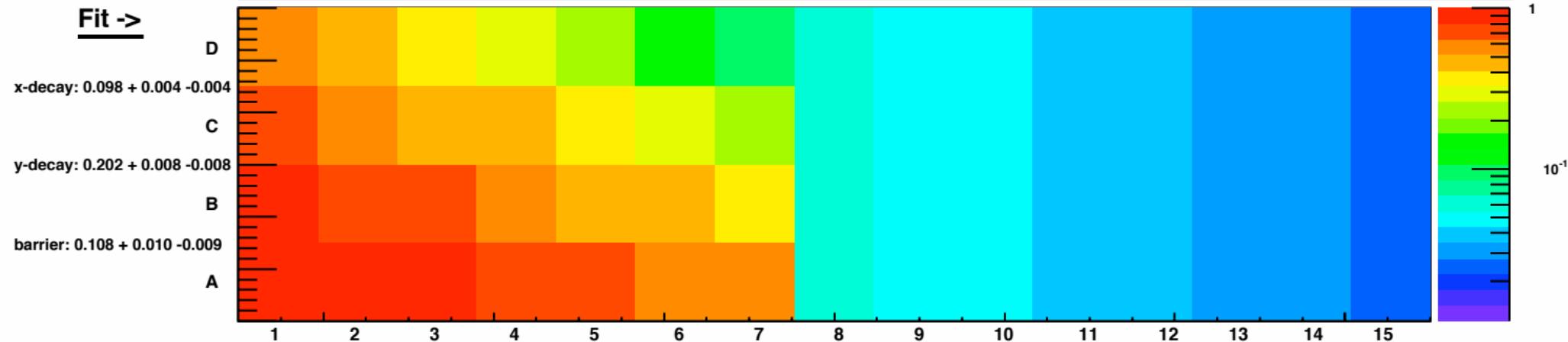


Paddle 11 PMT R

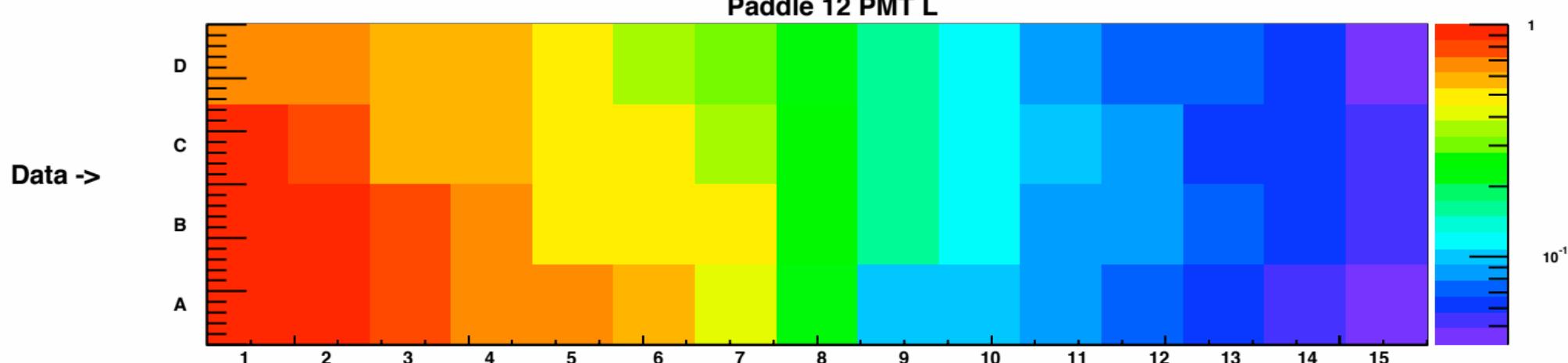


$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.098(\text{xbin} - 1)] + \text{Exp}[-0.202(\text{ybin} - 1)] - 1 \} + 0.108 \theta(\text{xbin}, 9) \text{Exp}[-0.098(\text{xbin} - 1)]$$

Fit ->

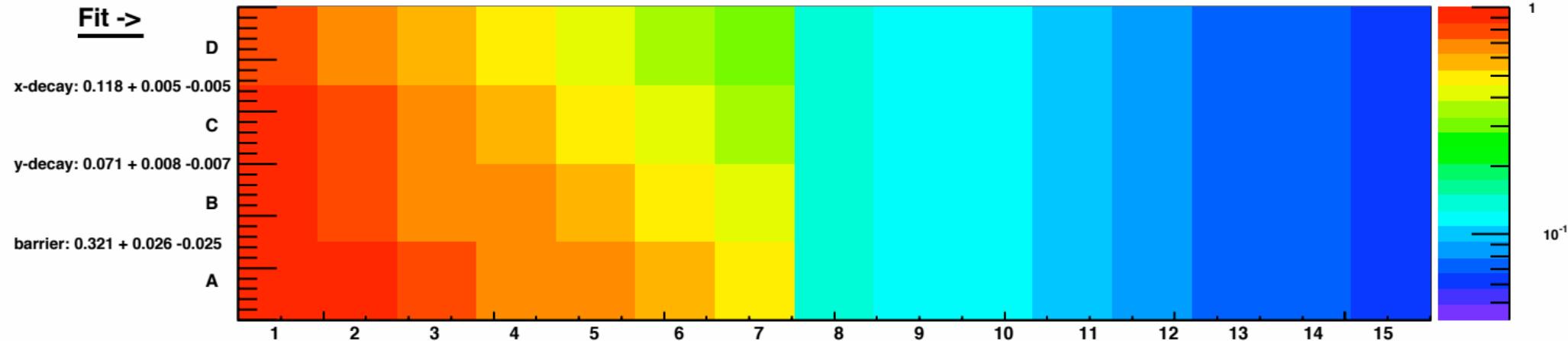


Paddle 12 PMT L

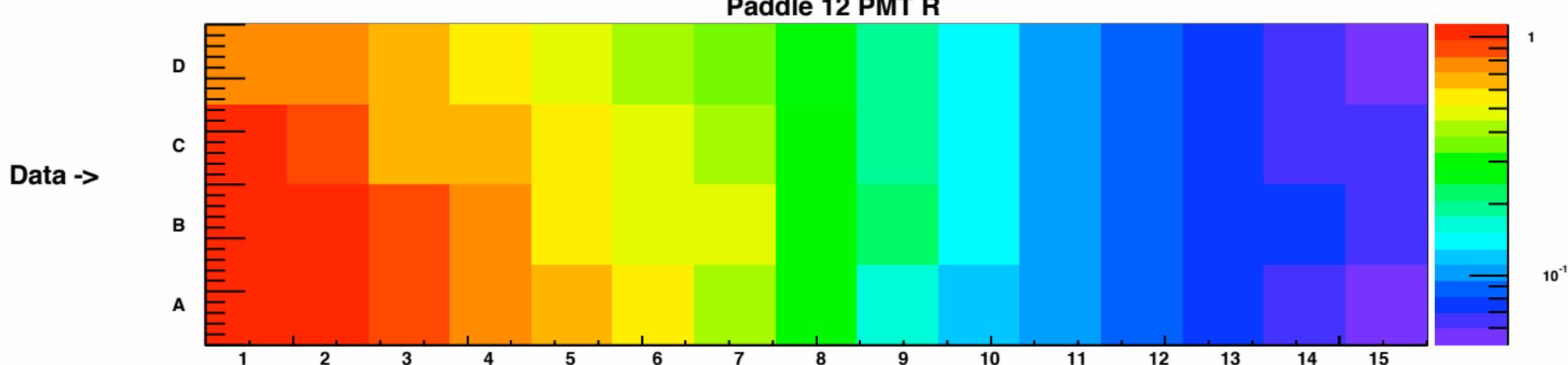


$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.118(\text{xbin} - 1)] + \text{Exp}[-0.071(\text{ybin} - 1)] - 1 \} + 0.321 \theta(\text{xbin}, 9) \text{Exp}[-0.118(\text{xbin} - 1)]$$

Fit ->

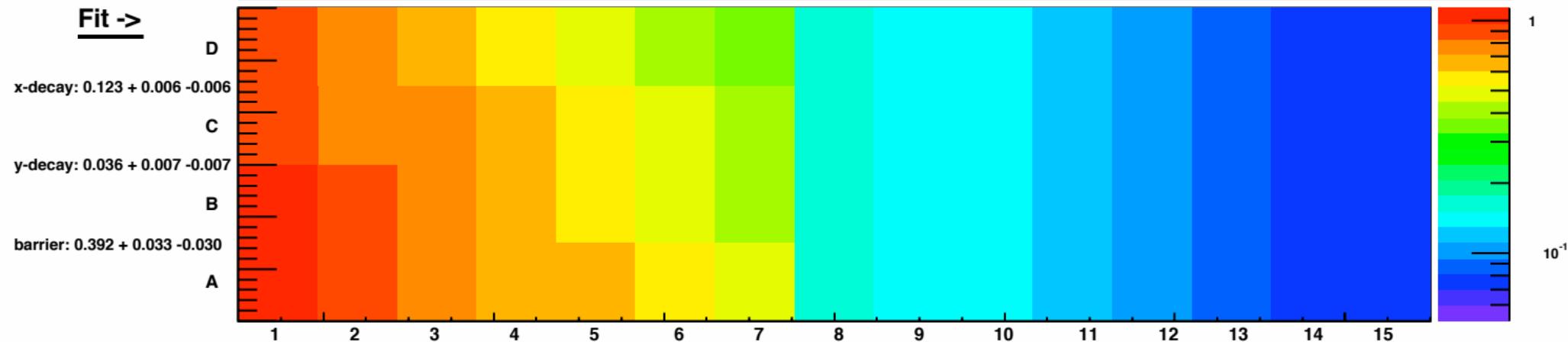


Paddle 12 PMT R

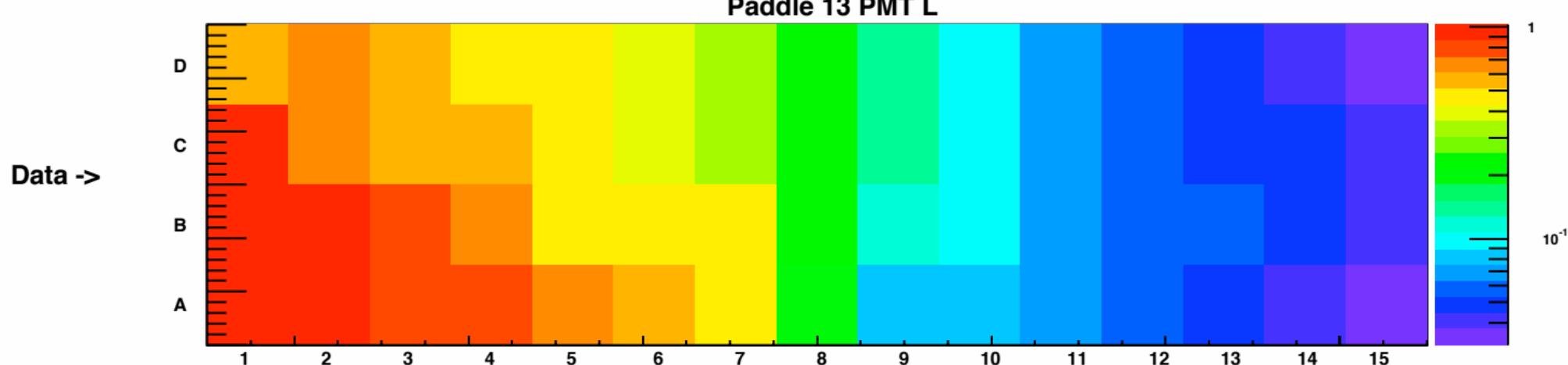


$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.123 (\text{xbin} - 1)] + \text{Exp}[-0.036 (\text{ybin} - 1)] - 1 \} + 0.392 \theta(\text{xbin}, 9) \text{Exp}[-0.123 (\text{xbin} - 1)]$$

Fit ->

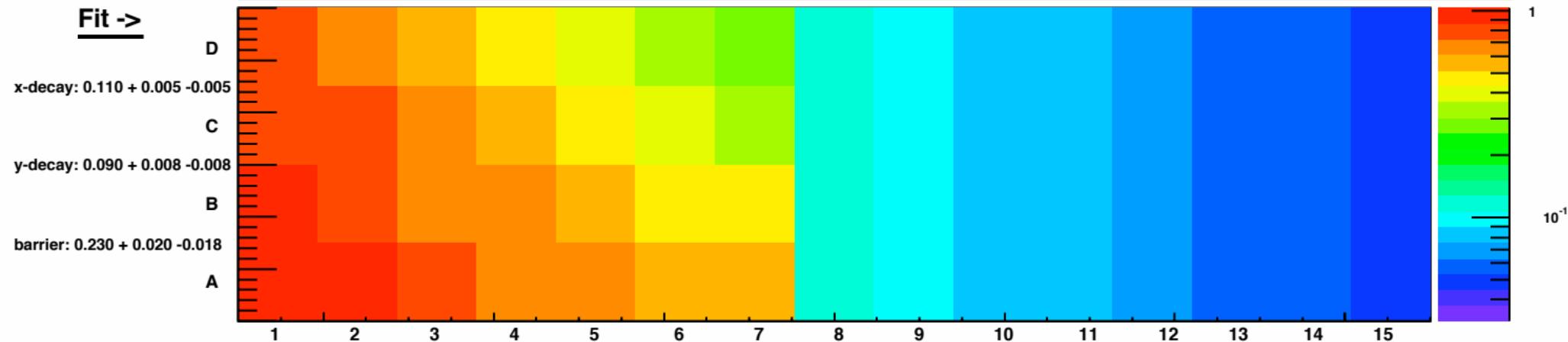


Paddle 13 PMT L

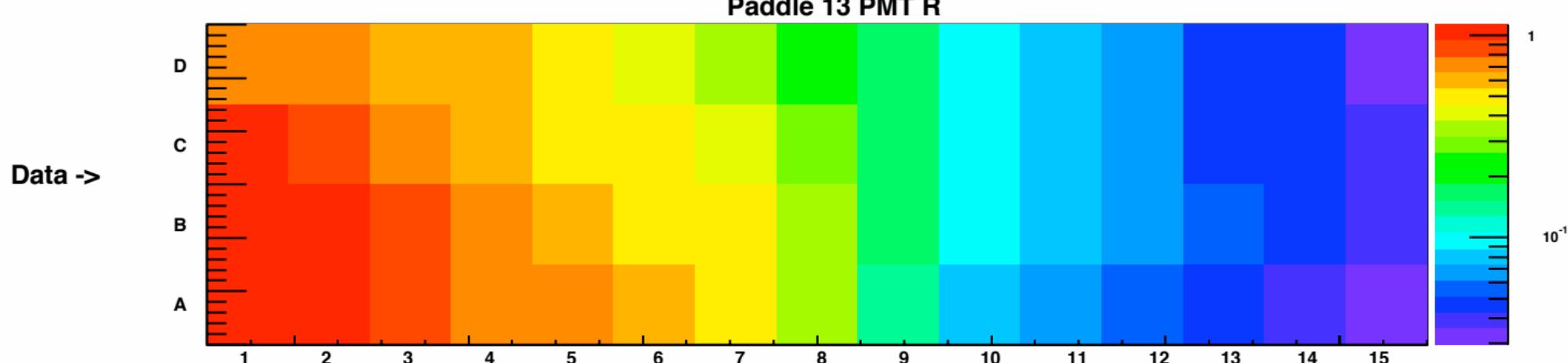


$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.110(\text{xbin} - 1)] + \text{Exp}[-0.090(\text{ybin} - 1)] - 1 \} + 0.230 \theta(\text{xbin}, 9) \text{Exp}[-0.110(\text{xbin} - 1)]$$

Fit ->

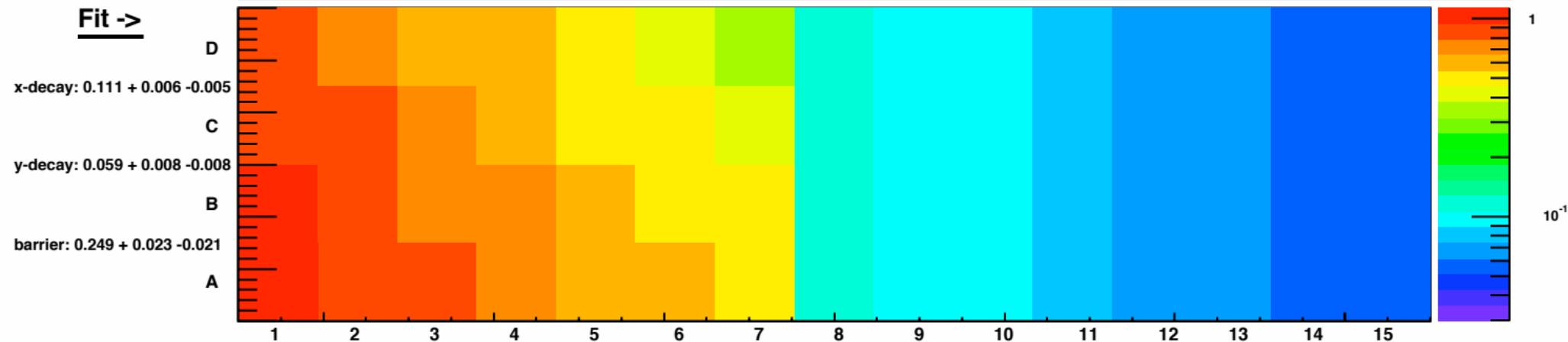


Paddle 13 PMT R



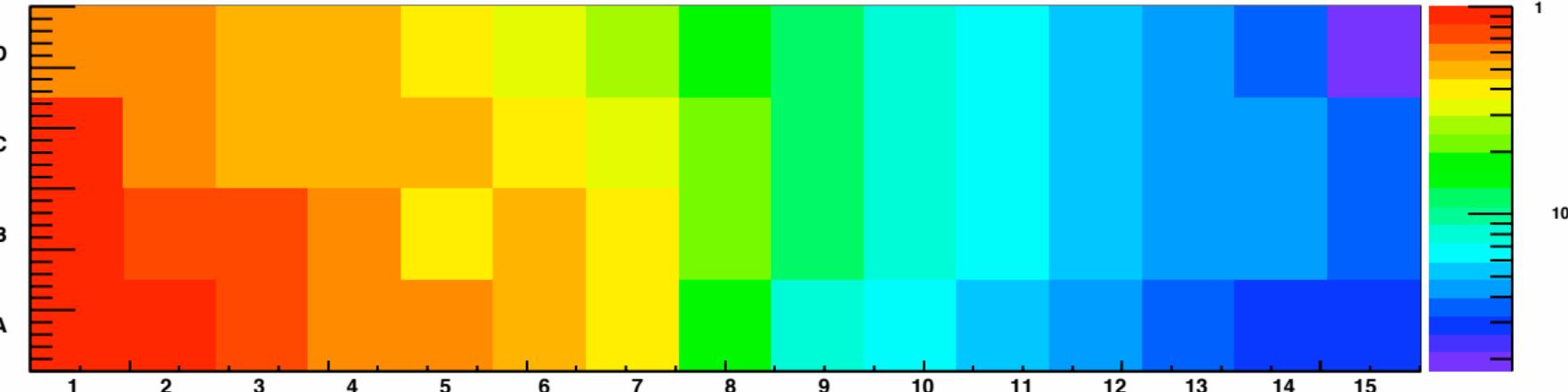
$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.111(\text{xbin} - 1)] + \text{Exp}[-0.059(\text{ybin} - 1)] - 1 \} + 0.249 \theta(\text{xbin}, 9) \text{Exp}[-0.111(\text{xbin} - 1)]$$

Fit ->



Paddle 14 PMT L

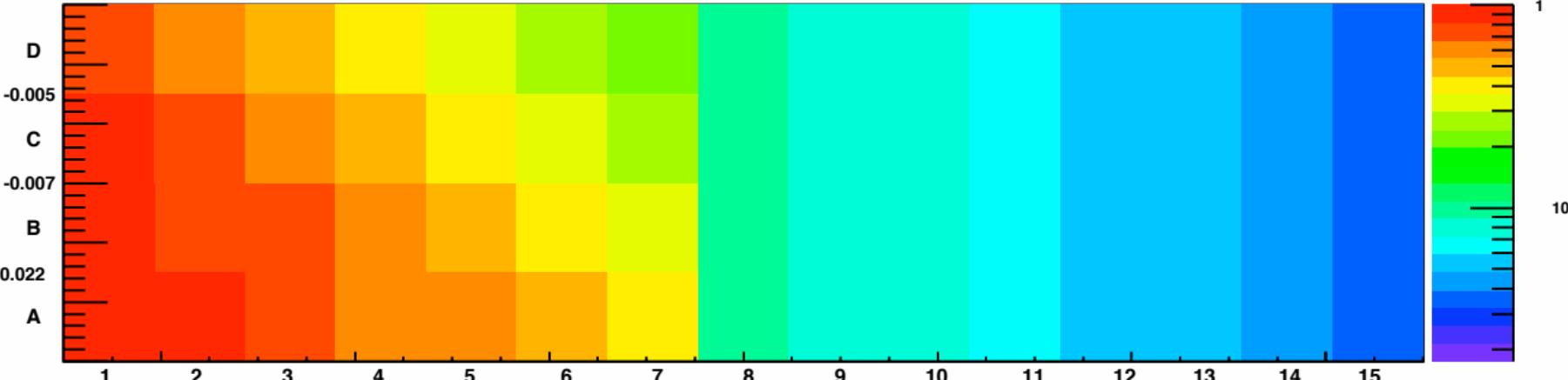
Data ->



$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.138(\text{xbin} - 1)] + \text{Exp}[-0.083(\text{ybin} - 1)] - 1 \} + 0.266 \theta(\text{xbin}, 9) \text{Exp}[-0.138(\text{xbin} - 1)]$$

Fit ->

x-decay: $0.138 + 0.005 - 0.005$

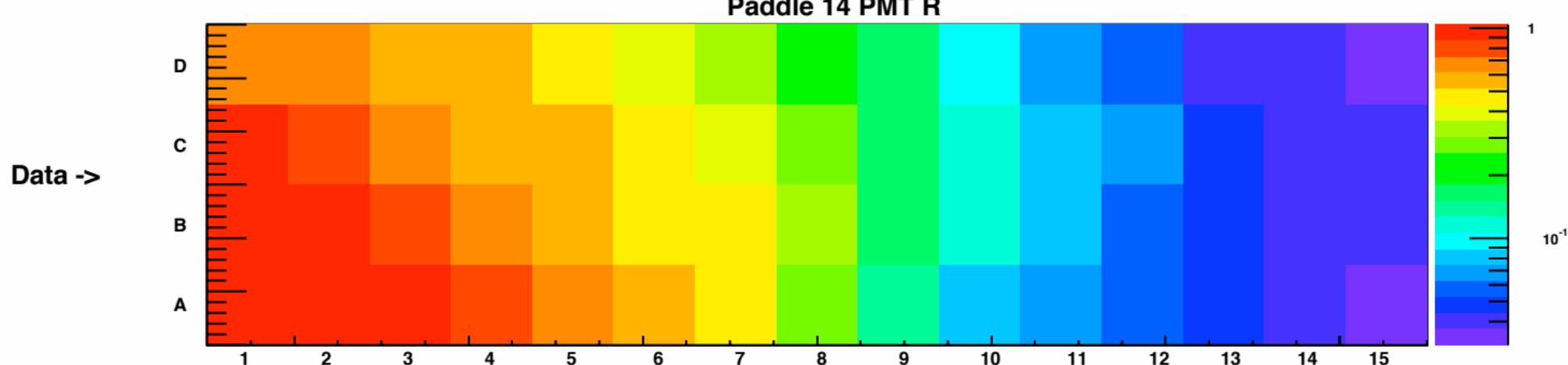


y-decay: $0.083 + 0.007 - 0.007$

barrier: $0.266 + 0.023 - 0.022$

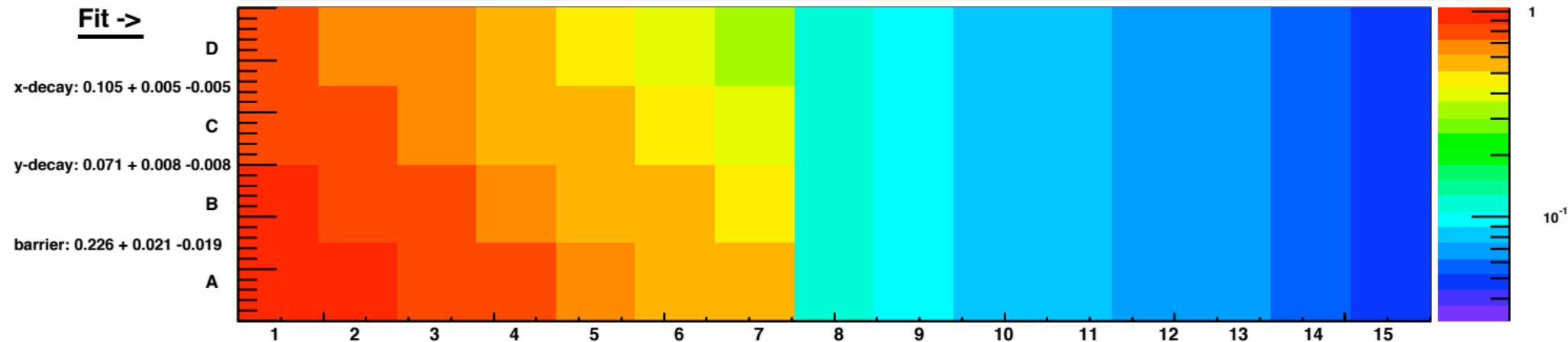
A

Paddle 14 PMT R

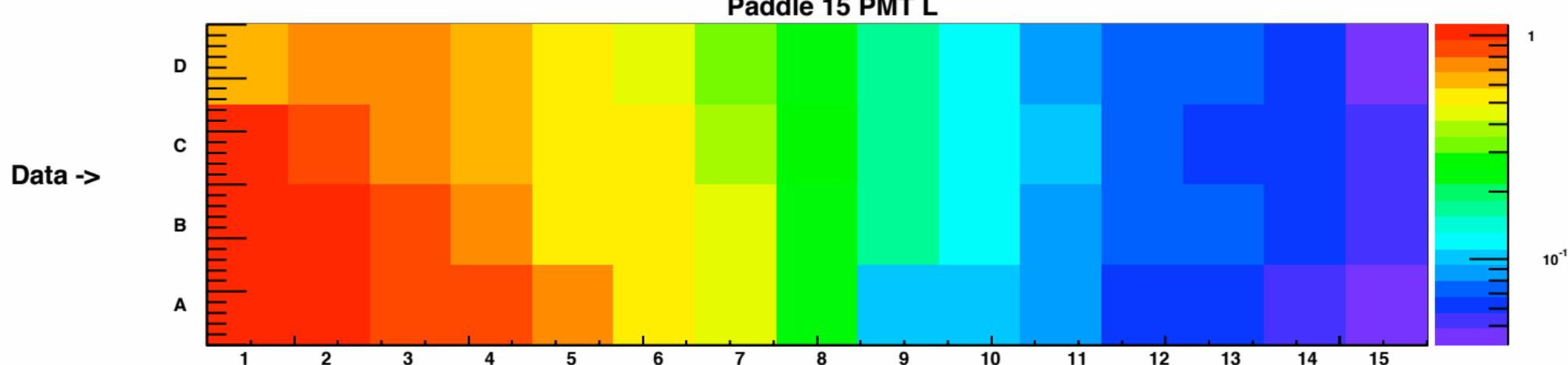


$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.105(\text{xbin} - 1)] + \text{Exp}[-0.071(\text{ybin} - 1)] - 1 \} + 0.226 \theta(\text{xbin}, 9) \text{Exp}[-0.105(\text{xbin} - 1)]$$

Fit ->

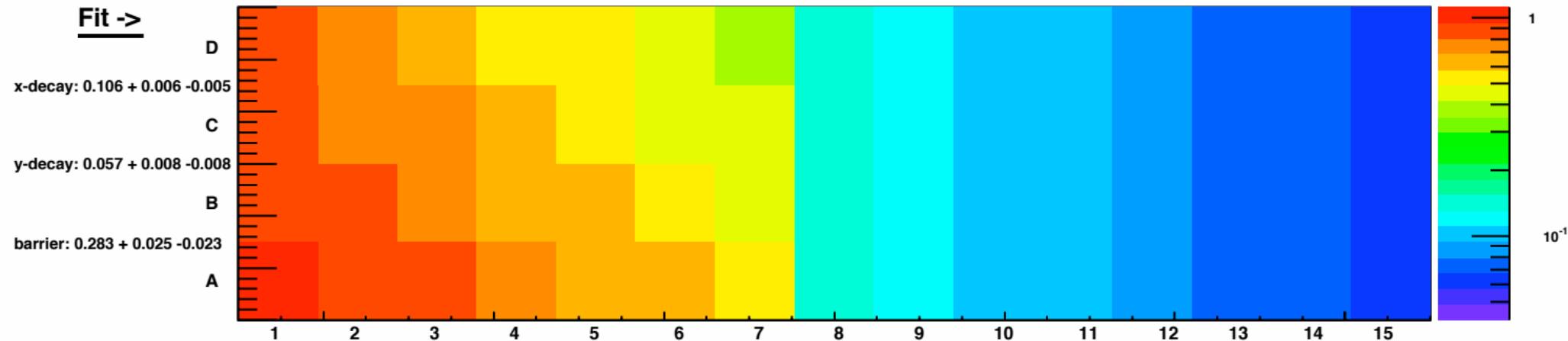


Paddle 15 PMT L

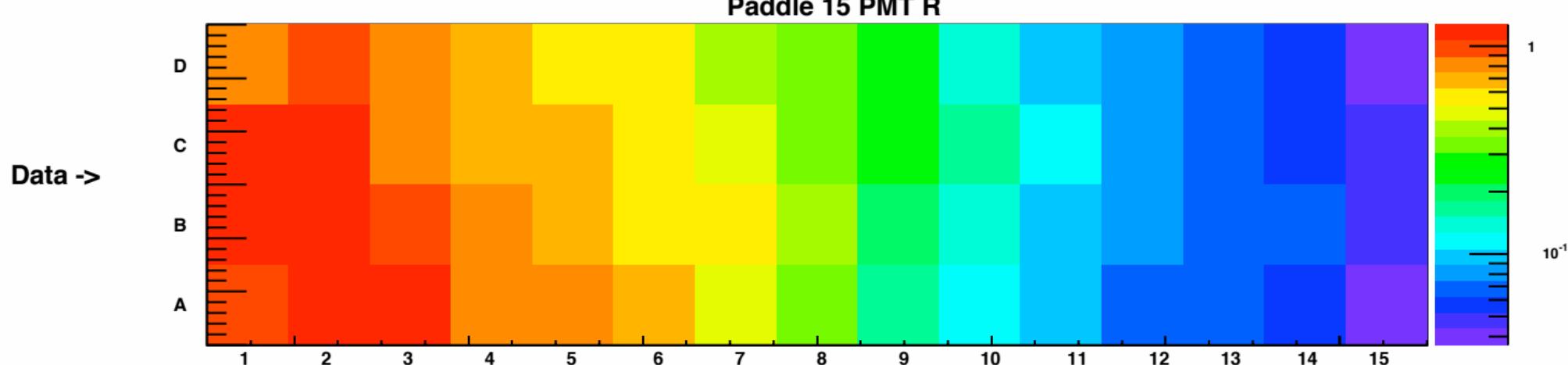


$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.106(\text{xbin} - 1)] + \text{Exp}[-0.057(\text{ybin} - 1)] - 1 \} + 0.283 \theta(\text{xbin}, 9) \text{Exp}[-0.106(\text{xbin} - 1)]$$

Fit ->

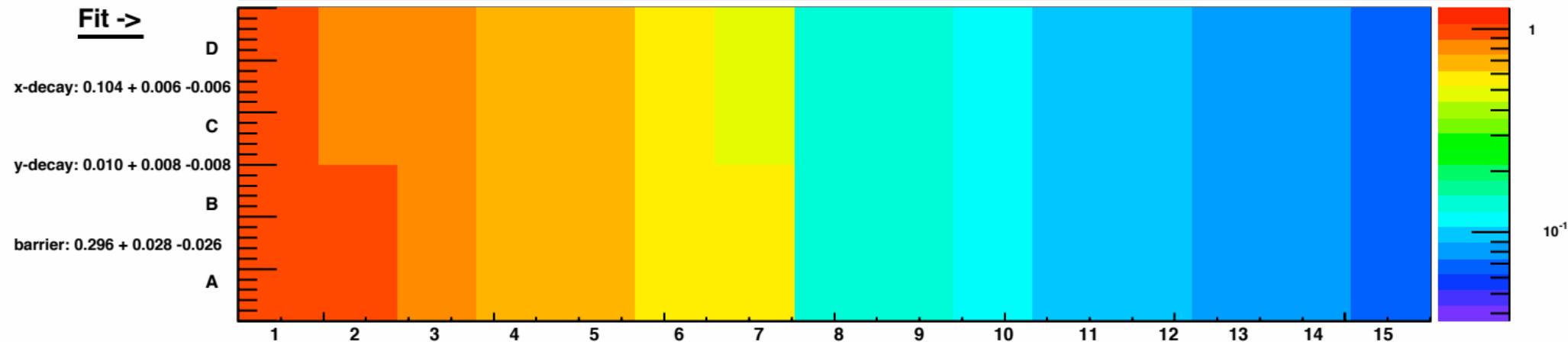


Paddle 15 PMT R



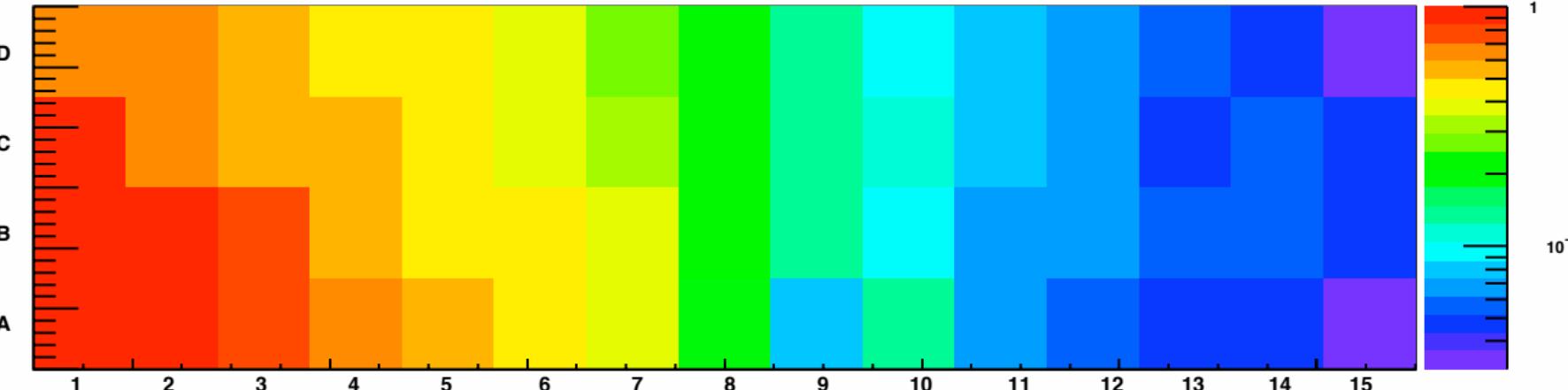
$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.104(\text{xbin} - 1)] + \text{Exp}[-0.010(\text{ybin} - 1)] - 1 \} + 0.296 \theta(\text{xbin}, 9) \text{Exp}[-0.104(\text{xbin} - 1)]$$

Fit ->



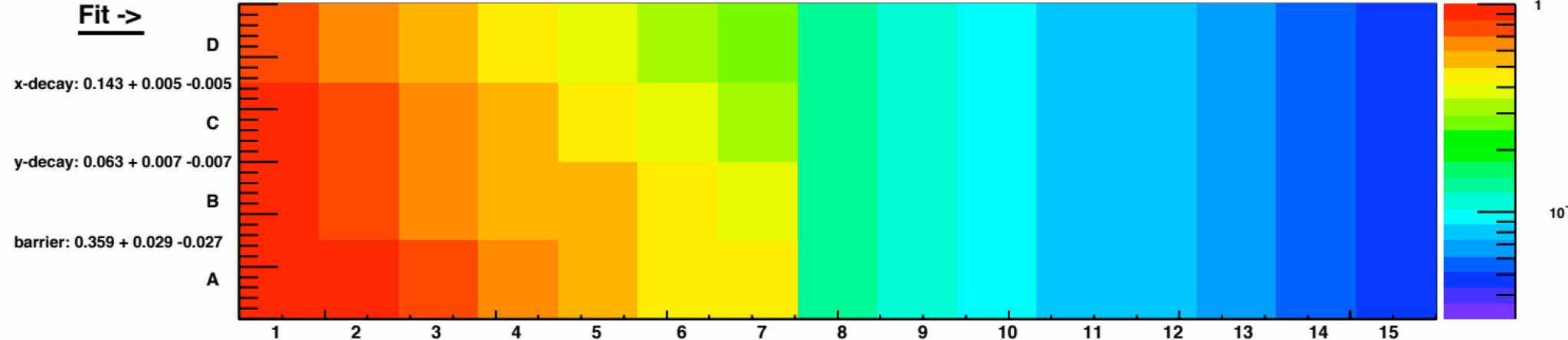
Paddle 16 PMT L

Data ->

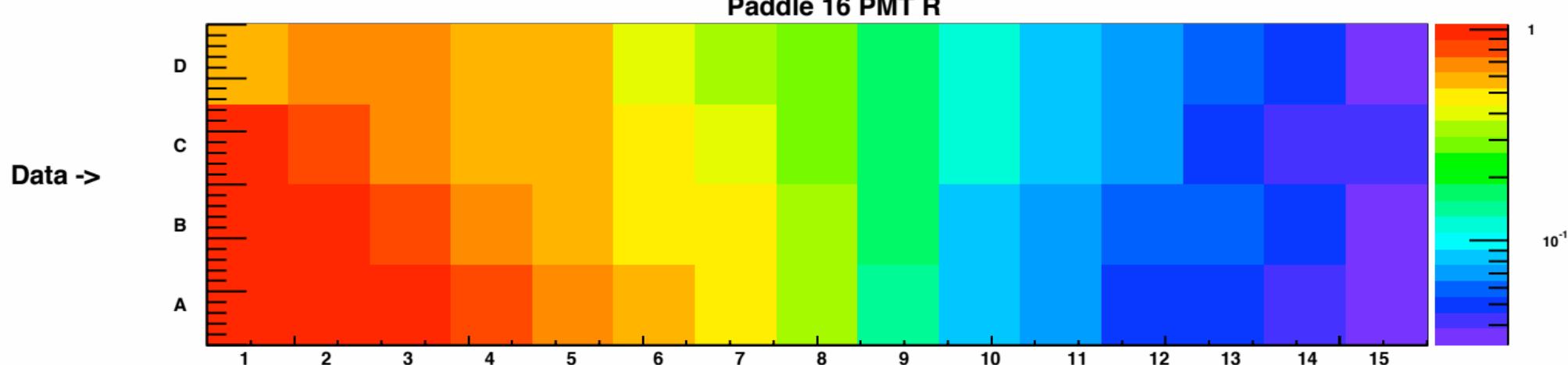


$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.143(\text{xbin} - 1)] + \text{Exp}[-0.063(\text{ybin} - 1)] - 1 \} + 0.359 \theta(\text{xbin}, 9) \text{Exp}[-0.143(\text{xbin} - 1)]$$

Fit ->



Paddle 16 PMT R



$$\text{FCN} = \theta(8, \text{xbin}) \{ \text{Exp}[-0.100(\text{xbin} - 1)] + \text{Exp}[-0.070(\text{ybin} - 1)] - 1 \} + 0.223 \theta(\text{xbin}, 9) \text{Exp}[-0.100(\text{xbin} - 1)]$$

Fit ->

